

Buffalo County Land and Water Resource Management Plan

March 1, 2011
(Final Copy)

2012—2022



Prepared by:
Buffalo County Land Conservation Department

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Mission Statement

***“ Committed to Serving the Public by Providing Leadership for
the Conservation of our Natural Resources.”***

Buffalo County
Land Conservation Committee
And
Land Conservation Department

In a close working relationship with

USDA – Natural Resource Conservation Service

UW – Cooperative Extension

Wisconsin Department of Natural Resources

USDA – Farm Service Agency

Executive Summary

The Buffalo County Land and Water Resource Management Plan is intended to be our master plan for meeting the requirements of Act 27 and Chapter 92 of the Wisconsin Statutes. This is a five (5) year (2011-2015) plan and will outline Buffalo County's long term plan for incorporating all of our existing conservation practices along with the new goals and objectives for protecting the water quality of Buffalo County. This plan will utilize the existing resources of the county to provide planning, information and education, technical assistance and administration from a wide array of funding sources to serve the conservation needs, while at the same do what is in the best interest of the residents of Buffalo County.

The initial Buffalo County Land and Water Resource Management Plan was written and approved by the Land and Water Board in 1999. The plan was revised, approved by the Land and Water Conservation Board and the Buffalo County Board of Supervisors in the spring of 2006. This plan is intended to complement and coordinate with existing plans rather than replace them. This is a 10-year plan to begin in 2012. It will guide department activities for the next 10 years, through 2021.

The plan is divided into six sections: Introduction and Plan Development, Public Participation, Resource Assessment, Objectives, Actions and Goals, Implementation, Information & Education, Monitoring, Partnering and Conclusion.

- 1. Introduction and Plan Development.** Will explain the history and the purpose of the plan. It will provide information on existing plans in Buffalo County and how the plans will compliment each other. The Introduction and Plan Development begins on page 10.
- 2. Public Participation.** The Land and Water Resource Management Plan is intended to be locally driven based on the resource concerns in each individual county, therefore a component of the plan needs to show involvement of the public. Public Participation begins on page 11.
- 3. Resource Assessment.** Provides information on the water resources (surface and ground water), 303(d) (impaired waters) in the county, soils of the county and soil erosion conditions, the major watersheds of the county, land-use, forestry in the county, State Parks, State Wildlife Areas, the Farmland Preservation Program, Manure Storage Ordinance, Non-Metallic Mining Reclamation Ordinance and Stormwater Discharge responsibilities. Resource Assessment begins on page 13.
- 4. Objectives, Actions & Goals.** Identifies the specific objectives of the plan and provides actions on how to achieve the goals identified in the plan. The Local Advisory Committee was very instrumental in coming up with a workplan of activities to meet

the goals spelled out in the plan. The annual workplan is part of the implementation and starts on page 42. Objectives, Actions and Goals begin on page 35.

5. **Implementation.** Implementation can be looked at, as the second phase of the plan. A plan is only as good as it is implemented. Implementation is targeted at working with landowners one-on-one to reduce soil erosion in the county to improve water quality. It also identifies a procedure to address the agricultural performance standards with landowners for compliance. Buffalo County will use voluntary, priority farm and non-compliance strategies for compliance. There will also be an opportunity for an appeal process and enforcement. Land Conservation Department staff will work directly with the DNR Watershed Basin Leader or their designee on issues of non-compliance. This section will also provide information on existing programs that will be used to provide funding for staff and cost share. Implementation begins on page 38.
6. **Information & Education.** The Local Advisory Committee felt that this component of the plan should be increased to provide the landowners of the county with better knowledge of the services that are provided through the Land Conservation Office. Information and Education activities provide an opportunity to talk about what we do. Information and Education activities begin on page 55.
7. **Monitoring.** A plan needs to be monitored for success. This section of the plan identifies ways that will be used to monitor the plan and track the success or reasons why the goals of the plan were not met. Monitoring begins on page 56.
8. **Partnering.** Buffalo County has a long history of working cooperatively with conservation partners in and outside the county and the courthouse. This section identifies each of the agencies and begins on page 57.
9. **Conclusion.** Provides closing statement about the plan, contents of the plan and the need for continued work in conservation for preservation of our natural resources. The Conclusion is on page 57.

ACKNOWLEDGEMENTS

The Buffalo County Land and Water Resource Management Plan was developed by the Buffalo County Land Conservation Department under the authority of the Land Conservation Committee.

Buffalo County's Land and Water Resource Management Plan was developed with input from a diverse group of individuals with a wide range of backgrounds and expertise. Each of the individuals played a role in providing input to address the resource concerns of the county. The Local Advisory Committee took the resource concerns identified at the landowner information meeting and established objectives and actions to achieve the goals spell out in the plan.

Thank you to everyone who helped with the contents of this plan.

Buffalo County Land Conservation Committee

John Schlesselman, Chairman Larry Balk, Vice Chairman
Allen Carothers, Member Corey Lewis, Member
David Bauer, Farm Service Agency Representative

Buffalo County Land Conservation Department

Julie Lindstrom, County Conservationist
Thomas Schultz, Conservation Technician
Chad DeWyre, Conservation Technician

USDA – Natural Resource Conservation Service

Todd Mau, District Conservationist James Ritscher, Conservation Technician
Christine Bouzek, Soil Conservationist Marie Livingston, Office Automation Clerk

Wisconsin Department of Natural Resources

Dan Helsel, Basin Leader

Wisconsin Department of Agriculture, Trade and Consumer Protection

Dennis Presser, Environmental Analysis and Review Specialist

Local Advisory Committee

Joe Bragger, Dairy Farm, President Local Farm Bureau
Mark Noll, Dairy Farm, Conservation Congress
Matt Danzinger, Dairy Farm
Randy Rotering Dairy Farm
John Schlesselman, Chairman, Buffalo County Land Conservation Committee

Landowner Information Meeting Attendees

October 6, 2010

John Schlesselman	Land Conservation Committee, chairman
Bruce Cornish	Landowner, General Manager – Garden Valley Co-op
John Stettler	Landowner
Mark Noll	Wisconsin Conservation Congress, Landowner, Dairy Farm
Barry Johnson	Town Chairman, Landowner, Dairy Farm
Tom Schultz	Land Conservation Department Technician
Larry Balk	Land Conservation Committee, vice chairman
Allen Carothers	Land Conservation Committee, member
Steve Weiss	Buffalo County Board of Supervisors, Landowner, Agriculture Business
John Bauer	Buffalo County Board of Supervisors, Landowner
Lee Wieland	Buffalo County Board of Supervisors, Landowner
Matt Danzinger	Dairy Farm
Randy Rotering	Dairy Farm, Landowner
Loren Wolfe	Dairy Farm, Landowner, Buffalo County Farm Bureau Board Member
Joe Bragger	Dairy Farm, Landowner, Buffalo County Farm Bureau Board Member/Dist. Representative - State Farm Bureau Board.
Chad Dewyre	Land Conservation Department Technician
Christine Bouzek	NRCS Soil Conservationist
Todd Mau	NRCS, District Conservationist
Carl Duley	UW-Extension Agriculture Agent
Julie Lindstrom	Land Conservation Department Conservationist

Overview of Buffalo County

Buffalo County is located in west-central, within the unglaciated, Driftless Area of Wisconsin. Pepin and Eau Claire Counties form the northern border, while Trempealeau County lies to the east.

The county has many high ridges and steep escarpments. See map on page 91). It is dissected by streams that are bordered by bottom lands or flood plains. The lowest part of the county, the flood plain of the Mississippi River in the extreme southern part of county has an elevation of approximately 650 feet. Farther back from the streams and along the edges of the flood plains are the stream terraces. The highest terraces are in the valley of Bear Creek in the northern end of the county. They rise to an elevation of approximately 900 feet.

Three rivers border the county; the Chippewa River on the West, the Mississippi on the south and west and the Trempealeau on the lower eastern border. The entire county drains into the Mississippi River.

The land area of the county is 684.5 square miles or 438,080 acres. The county is 27 miles wide at its northern end, but in the southern part it tapers gradually to a point near the place where the Trempealeau and Mississippi Rivers join. It is approximately 38 ½ miles long. The county ranks fortieth (40) in size among the 72 counties in Wisconsin. There are 17 civil townships (see map on page 92); Alma is the county seat. With a total population of 13,425, density is approximately 19.6 people per square mile, which is about the same as it was 10 years ago.

Buffalo County lies in two separate basins as defined by the DNR. The north-western part of the county, the Bear Creek Watershed, lies in the Lower Chippewa River Basin and the balance of the land in the county lies in the Black-Buffalo-Trempealeau Basin.

1. Introduction & Plan Development

Statutory Authority. 1997 Wisconsin ACT 27 and 1999 Wisconsin ACT 9 (the 2000-2001 Budget Bill), amended Chapter 92 of the Wisconsin Statutes to create a county Land and Water Resource Management Planning Program. The idea behind the program is to support a locally led process to make the best use of local, state and federal funds, based on each individual county's resources. Buffalo County wrote their initial Land and Water Resource Management Plan in 1999 and revised it in 2006 to end in 2010. This plan is a 10-year plan from 2012 – 2021, with a requirement to review it at the end of 2016. The plan is designed to use existing resources of the county as a building block to provide planning, information and education, technical assistance and administration to more effectively seek state, federal and other funding sources that are vital for the implementation of conservation practices by individual landowners to meet or exceed water quality standards.

This plan is intended to complement and coordinate with existing plans rather than replace them. The plan encourages cooperation with our conservation partners, from the USDA – Natural Resource Conservation Service (NRCS), UW-Extension Office, WI DNR Local Office, USDA- Farm Service Agency (FSA) and others. It also encourages the utilization of resources that are available to the partner agencies and organizations and serves as a tool to assess our resource needs and conditions, decide how to manage them and then provide us with a means to track the accomplishments of the plan.

Successful implementation of the plan is dependent on the conditions that are present when the plan is written. Several factors that will need to remain constant, include, but are not limited to, ability to maintain a minimum of (3) three full-time staff and availability of funding for implementation of conservation practices and education activities.

Existing Plans.

Buffalo County Agricultural Lands Preservation Plan. The Farmland Preservation Plan for Buffalo County was prepared and approved by the Buffalo County Board of Supervisors, by resolution on April 19, 1983. No changes have been made to the plan since then. The Farmland Preservation Plan was written in conjunction with the opportunity for agricultural landowners and local governments to participate in the Wisconsin Farmland Preservation Program, which was established by the Wisconsin Legislature in 1977 to provide tax relief in the form of state income tax credit for eligible farmers.

In the initial phase of the program, 1977 – 1982, farmers could voluntarily sign contracts, agreeing not to develop their land and then became eligible for the income tax credit. Tax credits after 1982 depended on whether the Buffalo County Board of Supervisors would prepare and approve a County Farmland Preservation Plan, which became known as the Buffalo County Agricultural Lands Preservation Plan.

As part of Wisconsin's 2009-2011 biennial budget process, the Wisconsin Working Lands Initiative was passed. The Wisconsin Working Lands Initiative can be found primarily in Chapter 91 of Wisconsin State Statutes, which includes a component to Expand and modernize the state's existing farmland preservation program. Under the proposal, every county is required to have a farmland preservation plan (Agricultural Lands Preservation Plan), regardless of whether that county participates in the state farmland preservation (tax credit) program. To fully participate in the Working Lands Program and allow farmers to continue to receive the farmland preservation tax credit, the Agricultural Land Preservation Plans must be updated and recertified as compliant with the state standards. Recertification deadlines for existing plans range from December 31, 2011 to December 31, 2015. A schedule for recertification of these plans in Wisconsin has been established by Department of Agriculture, Trade and Consumer Protection (DATCP). Buffalo County will be expected to have their Agricultural Lands Preservation Program updated by December 31, 2015.

Township Land Use Plans. There are sixteen Townships in Buffalo County. Most of these townships either have a draft plan, are in the process of completing their draft plan or will be starting their Land Use Plans in 2011.

In the Town Land Use Plans that are in draft form, in general most of the town plans show a positive attitude to do whatever possible to maintain prime soils as farmland and encourage growth in the agricultural industry by encouraging proper soil erosion control and runoff control methods, encourage the Buffalo County Board to maintain soil conservation staff and implement grants to county landowners, discourage housing or development in "prime farmland" soils, encourage young people to enter the farming industry and explore if any, incentives that can be given to help beginning farmers.

County Comprehensive Plan. Buffalo County is currently in the process of completing their County Comprehensive Plan and expect to have it completed during 2012.

2. Public Participation

The Buffalo County LWRM Plan was written/updated with partner agencies such as the Wisconsin DATCP (Department of Agriculture, Trade and Consumer Protection) and Wisconsin DNR (Department of Natural Resources).

A landowner information meeting was held on October 6, 2010, attended by individuals with varying backgrounds, including, landowners, farmers (dairy & cropping), members of the Land Conservation Committee and county board of supervisors, Farm Bureau members, an individual that serves on the Wisconsin Conservation Congress and others. The agenda for the landowner information meeting is one page 67. From that meeting a group of 5 individuals volunteered to serve on the LAC (Local Advisory Committee).

The LAC served to put together the initial work plan. They met on November 2, 2010 and again on December 1, 2010. The thought pattern that they followed was, “What should the staff in the Land Conservation Department be involved with for the next 10 years”. They used the comments from the landowner information meeting as a basis to make their decision. In addition to using the comments from the meeting to write the workplan, they also felt it was necessary to identify, in the plan, what the challenges may be for not meeting plan goals. They wanted the goals to be attainable, but also initially thought about why some of the goals would or could not be met. Following are some of the comments that came from the landowner information meeting, they are not prioritized, however they were rated by priority when the workplan was completed:

- Topography of the county – excessive runoff – prevention – erosion is a natural process and a challenge to work with
- Small dams (grade stabilization structures) in the valleys have merit, so do the ones on the blufftop – value of a grade stabilization conservation practice vs. the cost of construction
- Compliments on engineered dams that worked to a “T” in a rainfall event; NEED TWICE AS MANY – many non-engineered dams held in the recent rainfall as well – good contractors in the county
- Keeping the trained, knowledgeable qualified staff in the county – reduce high engineering costs to landowners
- What conservation practices work in excessive rainfall events – trend of excessive rainfall events in the last 6 -10 years
- Need to construct more waterway systems and maintain existing ones – strip cropping should be encouraged – value of residue – how woodland erosion fits into a conservation plan – more accurate yield data when completing conservation farm plans
- Cost Share funding – decision on what conservation practices to fund each year – technical assistance where no cost share funding is provided

The draft of the workplan was e-mailed to the members of the LAC on December 17, 2010 for comment and feedback. The workplan in particular and the plan in general was reviewed by the LCC when they met on January 5, 2010. A final draft of the plan was reviewed and recommended to send to the Buffalo County Board of Supervisors for presentation at this time as printed at a meeting on January 25th, 2011. The final draft of the plan was presented the County Board of Supervisors on January 25th, 2011, following the Land Conservation Committee Meeting.

A public hearing was held on February 22, 2011, to allow the public to comment on the plan. The plan was available to the public for a 10 day review period. Copies of the plan were available at the Buffalo County Courthouse, 407 South Second Street, Alma, WI 54610, 4th Floor Land Conservation Department Office, Room 403. See Notice of Public Hearing on Page 63 and a copy of the Notice of Public Hearing as it appeared in the official

county paper is on page 62. The plan has been approved by resolution of the Buffalo County Land Conservation Committee, immediately following the public hearing on February 22nd. The Buffalo County Finance Committee approved and signed the resolution at an official meeting on February 23rd, 2011. The plan was adopted by resolution by the Buffalo County Board of Supervisors on March 1, 2010. Agenda for the Finance Committee Meeting and the County Board Meeting are on pages 67 and 68. A copy of the signed resolution is on page 69 of the plan. The plan will be forwarded to the Land and Water Conservation Board for discussion when they meet on April 4, 2011.

3. Resource Assessment

Buffalo County land is located in two different DNR basins, “The Lower Chippewa River Basin”, and the “Black-Buffalo-Trempealeau Basin”. Basin plans have been written to provide information about the existing natural resources of each basin and measures that can be taken to preserve and enhance those resources. The “State of the Lower Chippewa River Basin” plan was published in 2001, and the “State of the Black-Buffalo-Trempealeau Basin” plan was published in 2002. There was a different approach to how each of the plans was written, so the information available may be different for each of those areas of the county.

The Lower Chippewa River Basin, includes the northwest most part of the county and all of the Bear Creek Watershed. The Black-Buffalo-Trempealeau Basin includes the balance of Buffalo County. Information from these plans indicates that in stream sedimentation, scouring, causing loss of habitat is the greatest threat to the water quality in Buffalo County Streams. There are a few streams that are impacted by nonpoint source pollution from barnyard runoff.

Water Resources

Surface Water

There are twenty-two named and unnamed lakes in the county, all small and shallow totaling 358 acres. Of the named lakes, Mirror Lake in Mondovi, is the largest with 44 acres. One-half of the lakes have maximum depths of less than five feet.

There are 8,390 acres of water, which include 73 miles of trout streams in the county. All or part of 21 streams are classified as trout streams and are stocked with brook or brown trout. Trout habitat in most Buffalo County streams is marginal due to silt or sand covered bottoms. Some natural reproduction occurs, but trout populations are largely maintained by stocking adult-sized fish. There are no Class I streams in Buffalo County. The map on page 90 of this plan shows the water bodies in Buffalo County.

“The DNR has collected a vast amount of biological and chemical information from Buffalo County streams during the last 5 to 10 years. This information is useful in assessing the health or condition of streams and targeting both watershed and in-stream management activities within the county. For instance, the majority of the 50 plus stations assessed for fish community health using the DNR fish index of biological integrity (fish IBI) are rated as fair, good or excellent condition. However, the fish IBI do show fair to poor fish community conditions within the Little Bear sub-watershed (northwestern part of the county). This may be a watershed where watershed and in-stream conservation practices could be implemented with expected improvement in the fish IBIs. The DNR has also assessed the water quality of many streams within the county, focusing on primary water quality pollutants like total phosphorus and suspended solids (turbidity). In general, Buffalo County has relatively high in-stream phosphorus conditions that can often exceed the new, 2010 state standards of 0.075 mg/l (75 ug/l). In portions of the county where streams have high phosphorus concentration like the Lower Buffalo watershed, nutrient management planning should be promoted as a way to minimize additional input of phosphorus to Wisconsin waters.” (Helsel)

A map on page 93 of this plan shows site specific areas of the county where phosphorus levels exceed the 2010 state standard. It is a suggestion from the DNR that any sites with a number above 0.075 may be considered above the standard and therefore a place to target with NMP and watershed inventory. It is important to keep in mind that there is no pattern on when the samples are collected. They are just random samples. After rainfall events may cause levels to be higher.

303d Streams – TMDL. Buffalo County currently has (8) eight streams on the Wisconsin’s 303(d) Impaired Waters List: Buell Valley Creek, Cochrane Ditch (Rose Valley), Eagle Creek, Irish Valley, Joos ValleyCreek, Wolf Valley Creek, Yaeger Valley Creek. The 303(d) steams in Buffalo County are all located in the Waumandee Creek Watershed.

Section 330(d) of the federal Clean Water Act requires states to develop a list of impaired waters (303(d) list’). A water is consider impaired if a) the current water quality does not meet the numeric or narrative criteria in a water quality standard or b) the designated use that is described in Wisconsin Administrative Code is not achieved. A documented methodology describes the approach used to list waters as impaired. The 303(d) Impaired Waters List is updated every two years.

Wisconsin is required to develop TMDLs, Total Maximum Daily Loads, for water on the 303(d) list. A TMDL is a quantitative analysis of the amount of a particular pollutant or load a stream or lake can allow before exceeding water quality standards. A TMDL can be used to implement water quality standards.

TMDLs have been created for the 8 streams on the 303(d) list in Buffalo County. TMDL for sediment addresses sedimentation and degraded habitat impairments conditions in the upper 7 miles of Eagle Creek, and the entire length of each of the other 6 streams. All of the

streams currently support a warm water forage fishery (WWFF) with potential to support a cold water fishery (COLD III), with exception of Eagle Creek, which has potential to support a cold water (COLD II) sport fishery.

Name	Length (in miles)	Approved TMDL
Buell Valley Creek	2.32	10/2005
Cochrane Ditch	10.06	10/2005
Irish Valley Creek	7.89	10/2005
Jahns Valley Creek	7.71	10/2005
Weiland Valley Creek	3.21	10/2005
Eagle Creek	8.47	4/2002
Joos Valley Creek	7.44	4/2002
Swinns Valley Creek	8.49	No

Sediment TMDL for Eagle Creek and Joos Valley Creek report states that both the Eagle Creek and Joos Valley Creek are severely limited by excessive sediment load, elevated water temperatures and habitat unsuitable to support a coldwater fishery. The degraded habitat in both streams can be characterized as stream banks trampled by cattle, little overhanging vegetation and loose sediment over sandy, unstable substrate. As a result, much of the length of the streams is wide and shallow; not the narrow and deep cross-section characteristic of a healthy coldwater stream in the driftless area of the state. Elevated water temperatures will be indirectly addressed by reducing sedimentation and improving overall stream habitat conditions.

The extensive sedimentation occurs year round. Undoubtedly, the amount of sediment reaches Eagle Creek and Joos Valley Creek through major rainfall and snowmelt runoff events through the year. However most of the sediment enters during spring runoff and intense summer rainstorms. Considerable sediment also enters the stream from eroding stream banks during runoff events. The best management practices to achieve the load allocation are selected and designed to function for 10-year or 25-year, 24-hour design storms; providing substantial control for the major rainfall events.

Preliminary implementation results in the headwaters of Eagle Creek show early stages of the restoration of the brook trout fishery, including natural reproduction, from limiting cattle access to the stream and stabilizing trampled and eroding streambanks. This is due in part of the significant reduction of cattle numbers in the Eagle Creek and Joos Valley Creek Sub-watersheds in particular.

TMDLs for Sediment Impaired Streams in the Waumandee Creek Watershed report (which is the balance of the 303(d) streams in Buffalo County (except Swinns Valley Creek, {where there is no TMDL report}), also states that these stream are severely limited by excessive sediment load, elevated water temperatures and habitat unsuitable to support a coldwater fishery. The degraded habitat in both streams can be characterized as stream banks trampled by cattle, little overhanging vegetation and loose sediment over sandy, unstable substrate.

The excessive sedimentation is a year-round situation. There is no seasonal variation in the sedimentation to these streams. Sediment is a “conservative” pollutant and does not degrade over time or during different critical periods of the year. Undoubtedly, the amount of sediment reaching the streams through major rainfall and snowmelt runoff events varies throughout the year. However, most of the sediment enters during the spring runoff and intense summer rainstorms. Considerable sediment also enters the streams from eroding streambanks during runoff events. The best management practices to achieve the load allocation are selected and designed to function for 10-year or 25-year, 24-hour design storms; providing substantial control for the major rainfall events.

Monitoring of the streams in this TMDL report since the 1998 listing has shown signs of habitat improvement and may be obtaining its potential use as Class III trout fisheries. The following table provides available data to show an increase in fish counts following completion of conservation practices completed during the Waumandee Creek Priority Watershed Project.

Subwatershed	Brook Trout	
	1989	2001
Buell Valley Creek	0	27
Irish Valley Creek		
County RD E (Bork Property)	0	6*
County RD E (upstream of bridge)	0	0
Private Drive	0	na
Private Drive Symitcek property)	0	52
Jahns Valley Creek	7 brown trout out of 25 fish total	
Weiland Valley Creek (above Hayes Valley Road)	0	87**
Weiland Valley Creek (below Hayes Valley Road)		0***

* Most likely stocked

**suggests the stream currently supports a Cold II fishery

***is impacted by cattle pasturing, bank erosion and feedlot runoff. Suggests the entire stream has potential to support a Cold II fishery is nonpoint sources are controlled. This is the site of several conservation practices that have been installed over the last (3) three years that has brought this farm up to the state standards.

Delisted Waters in Wisconsin. When a water has been restored so that Water Quality standards are now met, the water is removed from the state’s list of Impaired Waters. Each water has its own story – of degradation, discovery, restoration, monitoring and removal from the list.

See the Wisconsin DNR Web site for the complete TMDL reports for 303(d) streams in Buffalo County.

NR-243 – Concentrated Animal Feeding Operations

Under Chapter NR 243, DNR regulates livestock operations with 1,000 or more animal units. These CAFOs (Concentrated Animal Feeding Operations) require a Wisconsin Pollution Discharge Elimination System (WPDES) permit. An Animal Unit Calculation worksheet is used by a farmer/landowner so they know where their total animal count is. An example of the Animal Unit Calculation worksheet is on page 70.

In NR 243.26, DNR can now require a WPDES permit for medium and small CAFOs, which is defined as any owner or operator of an animal feeding operation with 300 to 999 animal units before a point source discharge of pollutants to navigable waters at an animal feeding operation occurs by either a man-made ditch, flushing system or other similar man-made device or pollutants are discharged into navigable waters that originate outside of the operation and pass over, across, or through the operation or otherwise come into direct contact with the animals confined at the operation.

In 2006, the Natural Resources Board adopted proposed revisions to NR 243 to meet federal regulatory changes. The changes primarily affect CAFOs and deal with restrictions on manure applications near surface waters and during the winter, phosphorus-based nutrient management requirements, adjustments to animal unit equivalency numbers, additional groundwater protection associated with land applied manure and development of emergency management plans. The revisions to NR 243 were necessary to comply with changes to federal regulations for CAFOs and to improve consistency in implementing the associated WPDES permit program.

Buffalo County currently has (3) three permitted farms and a fourth farm will be permitted in spring 2011. A map on page 98, shows the location of these permitted farms and the proposed farm.

Soils of Buffalo County

The soil survey currently being used in Buffalo County was published in 1962. A digital form of the 1962 Buffalo County Soil Survey is available through Web Soil Survey. Web Soil Survey (WSS) provides soil data and information produced by the National Cooperative Soil Survey. It is operated by the USDA Natural Resources Conservation Service (NRCS) and provides access to the largest natural resource information system in the world. NRCS has soil maps and data available online for more than 95 percent of the nation's counties and anticipates having 100 percent in the near future. The site is updated and maintained online as the single authoritative source of soil survey information. They anticipate to have an updated soil survey for Buffalo County by 2013.

The 1962 soil survey showed eight different general soil associations of the county. The map on page 93 of this plan shows the soil associations of the county. These soil associations are as follows:

1. Silty soils of the rolling uplands and steep stony and rocky land: Dubuque, Fayette, steep stony and rocky land.
2. Loamy soils of the rolling to hilly sandstone uplands: Gale, Hixton
3. Sandy soils of the rolling to hilly sandstone uplands: Boone, Hixton
4. Sandy soils of the stream terraces: Sparta, Plainfield
5. Silty soils of stream terraces: Bertrand, Richwood
6. Loamy terrace soils underlain by sand on stream terraces: Meridian, Tell
7. Wet organic and mineral soils of bottomlands: Peat and Muck, Etrick, Walkill
8. Soils of overflow bottom lands: Loamy, alluvial, Marsh.

Fayette-Dubuque Association

As the largest and most uniform association in the county, the principal upland soils are Dubuque and Fayette. Down soils are also extensive. These silt-loam soils are underlain by dolomitic limestone or materials weathered from limestone and were formed under forest (Fayette and Dubuque) or prairie (Downs).

This association has the largest acreage of soils under cultivation and in pasture or trees. Although highly productive, these soils are susceptible to water erosion unless managed properly. This association is 35.6% of the soil in the county.

Gale-Hixton Association

Found mainly in the northeastern part of the county, this association consists of rolling and hilly soils underlain by sandstone. Both are forest soils; the Gale series formed in loess over sandstone, while the Hixton soils formed from materials weathered from sandstone.

The soils of this association don't have the moisture hold capacity or productivity of the Fayette-Dubuque soils and are less erosive. This association accounts for only 8.5% of the soil in the county.

Boone-Hixton Association

This association is found mainly on the sandstone uplands of northern Buffalo County and is formed of materials weathered from sandstone. The narrow stream bottoms within the association are alluvial lands, which are too wet or subject to frequent flooding for cultivation.

These sandy soils are low in moisture-holding capacity, low in fertility, and are subject to both wind and water erosion.

Sparta-Plainfield Association

The soils in this association are nearly level to rolling soils formed in sand that were stream transported. Most of the soils are on the stream terraces throughout the county. Although the terraces in this association are not as high above the floodplain as other stream terraces in the county, they have rather steep, well-defined escarpments. Soils of this association are generally droughty, low in productivity, and subject to severe wind erosion. Soils on escarpments are subject to severe gullying if not protected.

Bertrand-Richwood Association

This association consists of deep, silty soils, mainly on nearly level to sloping benches or terraces along streams. The soils range from well to poorly drained.

Most of the soils in this association are highly productive, occur in fairly large areas and generally have mild relief. Some soils on bottom lands require drainage or protection from flooding. Soils with the steepest slopes are subject to water erosion or severe gullying.

Meridian-Tell Association

Soils of this association consist mainly of nearly level to sloping, loamy soils on stream terraces, chiefly along the Buffalo River. They vary from moderately to well drained.

These soils are subject to water erosion, gullying and slumping, and as a result, a large amount of sediment has been deposited in the valleys and terraces below.

Peat and Muck-Ettrick-Walkill Association

These soils occur on flats or in depressions along streams and are poorly drained. While they are subject to flooding, they are highly productive if drained and well managed.

Soil Erosion Conditions – Transect Survey

The transect survey method was originally developed in response to the need for accountability and the need for additional data on the current status of soil conservation efforts in Wisconsin. Survey results have shown that the transect method can produce a high level of reliability combined with a relatively short data collection process.

The transect method is a statistically reliable roadside survey method with data points located on one or both sides of the roadway. Generally these points are located at half-mile intervals. Approximately 500 to 600 sample points are inventoried in an established route that traverses the county. A map of the transect route is on page 79.

The first Transect Survey was conducted in 1999 in Buffalo County. In April of 2008, “WinTransect” was released. WinTransect is a rewrite of the existing DOS-based Transect

Survey and Software that was used to compile reports from the data entered prior to that time is compatible and usable with the new software, WinTransect.

WinTransect was able to preserve the core functions and data of the existing DOS Transect Software, and extend the functions by working better with the most recent versions of Microsoft Windows to make data collection and management easier, database compatibility with GIS and other software, soil loss is calculated using NRCS RUSLE2 model, rather than USLE, and holds data for multiple years in a single set of transect data.

In 2009, one year after the release of the new software, LCD modified the location of the points, while keeping the same route. The intent of these point changes was to better capture data from points where fields were being actively cropped. The data entered from each point is used to make comparisons of data from one year to the next. Such comparisons include change in acres of individual crops planted, tillage methods, and soil loss. Data is available county-wide and by watershed.

The following table shows a comparison of the 2009 to the 2010 data.

Average Soil Loss (by acre)		2009	2010
	< or = *"T"	94,635	93,516
	1 – 2 "T"	13,200	19,240
	2 – 3 "T"	5,593	7,830
	>3 "T"	19,463	12,304
Acres of Residue			
	< = 30 residue (mulch till)	57,043	58,162
	>30% residue (mulch till)	6,487	5,369
	>30% residue (no-till)	19,685	23,712
	** Other	49,675	45,648

*Tolerable Soil Loss ** Includes fields with CRP, Pasture, Idle where there is no crop (other acres are corn, soybeans, small grains & hay

As additional years of data is collected and crop rotations are completed in the annual transect data, there will be an opportunity to better analyze the data and understand fluctuations in the "T" factors and residue.

PL-566 Structures

The Watershed Protection and Flood Prevention Program is commonly known as the PL-566 Watershed Program. This program provides technical and assistance to state and local governments and tribes through the USDA – Natural Resource Conservation Service (NRCS) to reduce flooding, control gully erosion, create fish and wildlife habitat, develop recreation and rural water supplies, and better manage land in the watershed.

There are 13 (thirteen) PL-566 structures in Buffalo County. Six (6) of them are located in the Alma-Mill Creek Watershed, two (2) in Garden Valley sub-watershed and four (4) in the South Nelson sub-watershed. A map on page 91 shows the location of these structures.

Alma-Mill Creek Watershed. The watershed work plan for the Alma-Mill Creek Watershed was prepared by the Buffalo County Soil Conservation District with assistance from the Alma-Mill Creek Watershed Association (a group of landowner living in that watershed) and technical assistance provided by the USDA-Wisconsin Conservation Department, the US Fish & Wildlife Service of the US Department of the Interior, the Wisconsin State Soil Conservation Committee and the Agricultural Extension Service.

The main problems in the watershed were the advance and deepening of gullies in the 5 major tributaries and sedimentation in the downstream areas of the floodplain. The structural measures planned in the watershed included 6 grade stabilization structures that would stabilize gullies in the five main tributaries and reduce sedimentation in the lower reaches by 90 percent.

The 6 structures were built between 1958 and 1962 and are known as Alma Mill Creek #1, Alma Mill #2, Alma Mill #3, Alma Mill #4, Alma Mill #5 and Alma Mill #6. The structures are of the earth-fill design with a concrete conduit principal spillway and sod emergency spillway. Following construction, Operation and Maintenance will be the responsibility of the Buffalo County Soil Conservation District, now the Buffalo County Land Conservation Department.

Garden Valley (Rose Valley) Watershed. The watershed work plan for the Garden Valley (Rose Valley) Watershed was prepared by the Buffalo County Soil Conservation District with assistance from the Rose Valley Watershed Association (a group of landowner living in that watershed) and technical assistance provided by the USDA-Wisconsin Conservation Department, the US Fish & Wildlife Service of the US Department of the Interior, the Wisconsin State Soil Conservation Committee and the Agricultural Extension Service.

The major watershed problems are erosion and sedimentation. Sheet, gully, and streambank erosion were gradually eating away valuable and limited crop land. Existing roads and bridges were also endangered and requiring replacement before completion of their useful life. Sediment was being deposited in constructed channels in and downstream from Cochrane. It was filling in a channel at a recently constructed bridge on Highway 35 and near the highway.

Two structures were built in the Garden Valley (Rose Valley) Watershed and were completed by 1963. Structure No. 10 is an earth fill structure with a reinforced concrete drop inlet and an auxiliary earth spillway. Structure No. 11 is a box drop inlet spillway constructed of reinforced concrete. The structure will raise the water surface and pond water against the concrete chute at the roadway. The ponding provides a pool in which the energy of the flowing water over the roadway provides a positive means to carry water

from the upstream side to a lower elevation on the downstream side without damaging the channel and thereby eliminating gully advance and degradation.

South Nelson Watershed. The watershed work plan for the South Nelson Watershed was prepared by the Buffalo County Soil Conservation District with assistance from the South Nelson Watershed Association (a group of landowner living in that watershed). Technical assistance was provided by the Soil Conservation Service, USDA-Wisconsin Conservation Department, US Fish & Wildlife Service of the US Department of the Interior, the Wisconsin State Soil Conservation Committee and the Agricultural Extension Service. The workplan covers three adjoining sub-watersheds – Iron Creek, Deer Creek and Spring Creek.

The principal watershed problem is damage from gully erosion and the resulting sediment deposits downstream. The structural measures planned are 4 four grade stabilization structures that were designed to provide an 84 percent reduction in the damages in Spring and Iron Creek. In Spring Creek an extremely active gully is threatening cropland and a set of farm buildings. This gully was destroying one-half acre of land each year. Sediment from gullying and bank erosion was damaging the railroad bridge, the bridge on State Highway, and filling in the valleys along a town road forcing the town to raise the road about every five year. In Iron Creek, a drop inlet structure for grade stabilization was built in 1938 and a gully above this structure had become active and was eroding away cropland and advancing to threaten a county road bridge and farm buildings. The road and bridge at the lower end required raising every ten years.

Two straight concrete notch spillways were built in Iron Creek. Each has a fall through structure of eight feet. One drop inlet structure stabilized the grade through part of the valley. A reinforced concrete drop inlet spillway and a straight concrete notch spillway were built in Spring Creek. The structures were located to flood out eroding banks and eliminate the most serious sources of sediment. There were expected to eliminate 74 percent of the sediment sources in Spring Creek and 73 percent of the sources in Iron Creek.

Following construction of these structures Operation and Maintenance became the responsibility of the Buffalo County and the Land Conservation Department in particular.

Major Watersheds of Buffalo County

Buffalo County is located in two separate DNR Water Basins. The Bear Creek Watershed in the north-western part of Buffalo County is located in the Lower Chippewa River Basin and the balance of the county is located in the Black-Buffalo-Trempealeau Basin. There are six major watersheds in the county. The following is a description of the main watersheds in Buffalo County.

Bear Creek Watershed. The Bear Creek Watershed is a tremendously agricultural area combined with great natural and considerable potential for further development of wildlife habitat. The Bear Creek Watershed has steep topography with limestone based bedrock. This formation is subject to groundwater contamination.

Several streams and the Chippewa River are predominant features in the watershed. There are 44 miles of streams and 2 lakes (21.3 acres). Ground water is the sole sources of drinking water in the watershed. The Class II trout fishery is threatened by sedimentation, nutrient loading and increased water temperatures. Periodic flooding has an effect on in-stream habitat.

57% of the watershed is forested acres. The forest resources have statewide economic importance as a source of wood products and as a foundation for the recreation industry of the area. There are 9,742 acres under state DNR control (Tiffany Wildlife Area). An additional 4,600 acres are under control of the US Fish and Wildlife Service.

The Bear Creek Watershed is a very popular recreation area. The Tiffany Wildlife Area borders the entire northwest side of the watershed along the Chippewa River. There are 4.4 miles of Class III trout streams and 4.0 miles of Class II trout streams. This area is extensively used for small and large game hunting, bird watching, fishing, hiking camping and other outdoor activities. It is a very popular area for visitors from outside the county and state for numerous outdoor activities.

Lower Buffalo River Watershed. The Lower Buffalo River Watershed is located in the central part of Buffalo County and contains over 270 miles of land that drains directly into the Mississippi River. There are 29 named and 43 unnamed streams in Buffalo County, which make up a total of 250 miles of streams. The Lower Buffalo River Watershed is divided into (9) nine sub-watersheds.

Because of the diversion during the glacial period, this watershed now flows through two distinctly different geographic areas. The upper part of the watershed is characterized by broad valleys and narrow, short-crested ridges. The lower part, in contrast, is characterized by deep valleys. The largest source of pollution to the streams, where information is available in this watershed is nonpoint sources of pollution. Other sources include streambank pasturing and streambank erosion. The impact that this pollution has on the streams in this watershed is in-stream sedimentation, in particular, which is very typical of all the streams in Buffalo County.

The Buffalo River being the largest waterbody in this watershed which has water capable of supporting a community of warm water sport fish or serving as a spawning areas for warm water sport fish. There are also aquatic endangered, threatened or special concern species found in the Buffalo River. There are no waterbodies on the DNR's 303(d) list of impaired waters that are located in the Lower Buffalo River Watershed. The nonpoint sources ranking for the Buffalo River is high.

Upper Buffalo River Watershed. Only a small part of the Upper Buffalo River Watershed is located in Buffalo County. The watershed contains a total of 194 square miles and is located in the counties of Buffalo, Eau Claire, Jackson and the largest part of the watershed is in Trempealeau County. There are 16 named and 52 unnamed streams in this watershed and only 2 of the named streams are located in Buffalo County with one of them being the Buffalo River, which stretches the whole length of this watershed and into the Lower Buffalo River Watershed.

The Buffalo River in the Upper Buffalo River Watershed suffers from non-point source pollution which causes in-stream sedimentation. Implementation of management practices could enhance the overall ecological health of the biological community. The Buffalo River is not on Wisconsin's 303(d) list of impaired water and has an overall medium non-point source ranking.

Session Valley Creek is the only other creek in the Upper Buffalo River Watershed that is located in Buffalo County. Session Valley Creek is not on Wisconsin's 303(d) list of impaired water. This creek has not been assessed and there is no individual nonpoint source rank for Session Valley Creek.

Waumandee Creek Watershed. The Waumandee Creek Watershed drains 204 square miles of land in Buffalo County and is characterized by steep topography, narrow valleys and numerous streams. Surface water drains to the Mississippi River by direct runoff or via Waumandee Creek and its tributaries. The Waumandee Creek Watershed is divided into 13 sub-watersheds.

Land use in the watershed is mainly agriculture with a small population. Most of the population lies on farmsteads outside the incorporated areas. There is a trend of land use change that has been occurring in this watershed and other parts of the county where large tracts are being split into many small parcels for single family housing. This change in the rural landscape can potentially have a negative effect on natural resources.

Streams throughout the watershed suffer from moderate to severe streambank erosion and extensive channelization has occurred in some portions. Streams that were at one time cold, clear and lined with gravel riffles (conditions favorable for trout reproduction) have become blanketed with deposits of silt, sand and much. Elevated streambeds and increased runoff have resulted in downstream flooding and the loss of stream-side lands. It is suspected that the loss of streambank cover and stream-side vegetation have raised in-stream temperatures and have caused dissolved oxygen levels to fall.

The Waumandee Creek Watershed was selected by the Wisconsin DNR as a Priority Watershed Project in 1990 to receive funds for administration and cost share for individual landowners in the watershed to construct best management practices to reduce soil erosion and improve water quality. The watershed project ended with the last of practice construction in 2001. Buffalo County signed 247 cost share agreements and provided \$3.7

million dollars to private landowners during the project. Eight (8) streams in the Waumandee Creek Watershed are identified as 303(d) impaired waters.

Middle Trempealeau River. The Middle Trempealeau River Watershed is a 220 square mile drainage area located in the central portion of Trempealeau County, with only 16% or 36 square miles of this watershed located in the eastern part of Buffalo County. There are 16 sub-watersheds that drain surface waters to the Trempealeau River, with only four of those in Buffalo County.

The watershed is located in a geographic area of narrow, steeply sided, wooded ridges and rolling valleys. The steep topography of the area is characterized with wooded slope and agricultural croplands in the valleys. Sixty three percent (63%) of the area is in agriculture land use, 23% is woodland and the remainder is developed wetlands. Most of the streams are considered cold water streams and some contain populations of trout. Sixty-two percent (62%) of the residents live in the four municipalities, which are all located in Trempealeau County and only 38% live in the townships. Trends in population indicate no significant growth has occurred in these areas and in some cases, there is a slight decline in overall populations for rural agricultural areas in Wisconsin.

Sources of pollution to the streams in the Middle Trempealeau River Watershed are primarily from agricultural land and the major sources of water pollution are upland, streambank and gully erosion and barnyard runoff.

The Middle Trempealeau River Watershed was selected by the Wisconsin DNR as a Priority Watershed Project in 1992 to receive funding for administration and cost share funds for individual landowners in the watershed to construct best management practices to reduce soil erosion and improve water quality. The watershed project ended in 2004, with the last conservation practice construction in 2005. Thirty (30) cost share agreements were signed and approximately \$550,000.00 dollars were spent to complete conservation practice construction during the project.

There is (1) one 303(d) stream (Swinns Valley Creek) located in Buffalo County that is part of the Middle Trempealeau River Watershed. There currently is no TMDL report for this creek, however the source of pollution to this stream is from cropland erosion and it impacts sedimentation to the stream and in-stream habitat. There are an additional 2 streams located in Trempealeau County in the Middle Trempealeau River Watershed that are on the 303(d) list of Wisconsin Impaired Water, Tappen Coulee Creek and Welch Coulee Creek.

Lower Trempealeau River Watershed. The Lower Trempealeau River Watershed is located in the southern most part of Buffalo County, with a total of 177 square miles and most of that located in Trempealeau County.

The Lower Trempealeau River Watershed has 11 named and 46 unnamed streams, 3 of which are located in Buffalo County, Doelle Creek, Heuer Valley Creek and Keller Creek. Very little data is available for these streams. Doelle Creek is 4 miles long and has the

potential for some natural reproduction. It currently has no natural reproduction and requires annual stocking of legal size fish to provide sport fishing. Non-point source pollution is Doelle Creek's major source of pollution from in-stream sedimentation and scouring. This creek is not listed on the DNRs impaired waters list and has not received a priority ranking for individual nonpoint source pollution.

Heuer and Keller Creek are also on the DNRs 303(d) list of impaired water and they also have not received a priority ranking for individual nonpoint source pollution. No additional information is available for these streams.

GroundWater

Buffalo County residents rely entirely on groundwater for drinking water. The rural population depends on shallower, less protected aquifers than the urban population served by public water supplies. Most groundwater in the state is consumed by residential users for such needs as drinking water, cleaning and sanitary purposes. Industry is the next largest groundwater consumer, followed by irrigation.

Water distribution is governed by the hydrologic or water cycle, which is kept in motion by solar energy and gravity. As rain falls to earth, some flows downhill as runoff to water bodies. Some evaporates; plants take up some. The rest trickles down through surface soil and rock. This water becomes groundwater. Groundwater is discharged into surface water bodies such as wetlands, lakes and streams – the low places where groundwater meets the land surface. When there is development, large areas are paved over. This decreases in the area within a watershed where rain can infiltrate to the groundwater. The result is increased over land flow to surface water bodies. Flooding, increased sedimentation of streambeds, increased stream temperature and degradation of stream habitat will result. (State of the Lower Chippewa River Basin, 2001)

The potential for groundwater contamination is determined by land use practices applied to an area in conjunction with the physical setting. The “physical setting” of an area includes, but is not limited to, soil, type and thickness, presence of glacial sediments such as sand and gravel, depth to bedrock, depth to groundwater, and topography. (State of the Lower Chippewa River Basin, 2001)

All watersheds in the state were ranked for groundwater contamination by the Drinking and Groundwater Section of the WDNR in 2000. A score of 20 or more is considered medium. At 30 or greater, the score is considered high for groundwater contamination potential. Watersheds that scored high (above 30) had a large percentage of rural or heavy urban land use coverage.

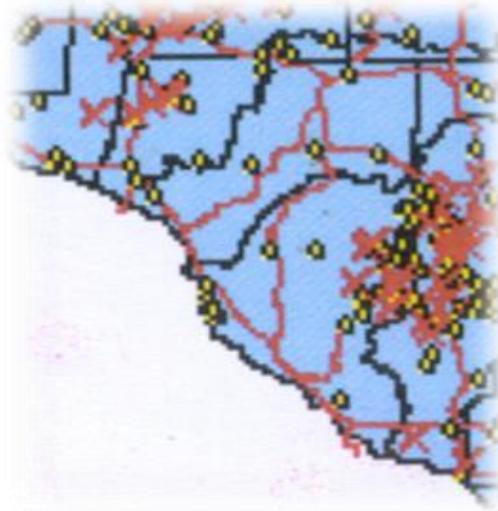
Groundwater Ranking:

Watershed	Score
Bear Creek	30.49
Lower Buffalo River	32.56
Waumandee Creek	27.96
Middle Trempealeau River	46.82 *
Lower Trempealeau	23.69

*Of 242 wells sampled for nitrate, 9.5% exceeded the ES and 40.5 exceeded the PAL (see below).

Data on the following state-wide map was extracted using the GRN (Groundwater Retrieval Network) database from data in the Public Water Supply and Private Water Supply database systems and mapped using ArcView GIS Software. Nitrate enforcement standard (ES) and preventative action limit (PAL) exceedances for public and private drinking water supply wells. The nitrate ES and PAL is 10 and 2 milligrams per liter (mg/l) respectively. The data represents sampling at 23,647 unique wells from which 73,706 total samples were analyzed.





The Wisconsin DNR Website

([http://prodoasext.dnr.wi.gov/inter1/hicap\\$ws_hicap_web_v.actionquery](http://prodoasext.dnr.wi.gov/inter1/hicap$ws_hicap_web_v.actionquery)) has information on high capacity wells in the state by county. Information from this web site showed that Buffalo County has 64 high capacity wells as define by the Wisconsin DNR. Following is a chart that shows the location and classification of the high capacity wells in the county.

Classification	Township									City
	Alma	Belvidere	Dover	Maxville	Modena	Mondovi	Naples	Nelson	Waumandee	
Irrigation (Agriculture)	0	9	1	15	1	3	3	8	1	0
Industrial	1	7	1	0	0	1	0	5	7	0
Waste Water Treatment	0	0	0	0	0	0	0	0	0	1

Prior to 2000 there were 30 irrigation and 14 industrial high capacity wells county-wide. Since 2000 11 industrial and 9 irrigation wells have been drilled and 7 of the irrigation wells have been drilled since the beginning of 2008, with 3 of them located in the Town of Nelson, 3 in the Town of Maxville and 1 in the Town of Modena. Two of the industry wells were drilled in Town of Belvidere and 1 in the Town of Nelson. Even though these wells are permitted by the DNR prior to being drilled, it was a decision of the Local Advisory Committee (LAC) that the LCD staff compile a list of the large capacity wells in the county and update the list annually. This activity is identified as part of the work plan under Groundwater Quality/Quantity.

Land Use

Agriculture is still the dominate land use in Buffalo County today, with dairy, crop, and mixed livestock operations on an estimated 1,229 farms county wide. The average-size farm in Buffalo County is 250 acres, down from 280 acres in 2002, compared to the state-wide average for Wisconsin of 194 acres per farm, down from 204 acres in 2002, which ranks Buffalo County 7th, down from 4th in the state in 2002 in average size farm, with Adams County having the largest farm per acre with 283, followed by Ashland County at 273, Portage County at 264, Lafayette County at 255, Jackson County at 253 and Langlade County at 252.

Following is a table that shows the number of farms, average size of farms and land in farms in Buffalo County from 1991 through 2007. The trend is that there are more farms, with less acres and there was a loss of 66,965 acres of land in farms in this 16-year period of time, which is 18% decrease in land in farms.

	Number of Farms*	Average Size of Farms	Land in Farms
1979	1,310	295	387,000
1989	1,120	338	378,000
1998	1,170	291	341,000
2002	1,128	280	316,132
2007	1,229	250	307,035

*Farm is currently defined as a place that sells, or would normally sell at least \$1,000 of agricultural products during the year.

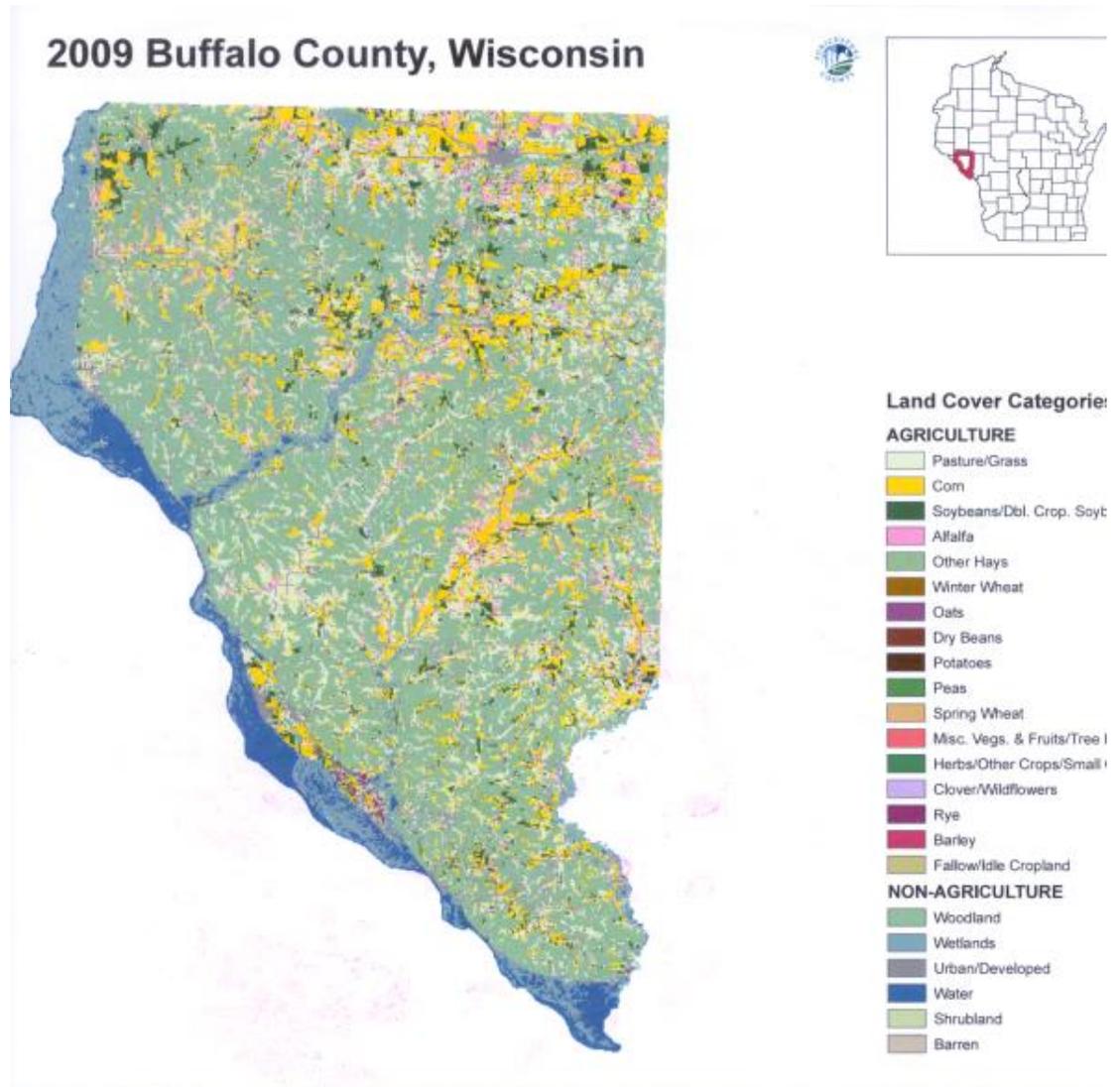
The table shows a decrease of 79,965 acres over this 28 year period of time, which is a 21% decrease in farmland.

Following is a table that shows comparable statistics for Wisconsin.

	Number of Farms*	Average Size of Farms	Land in Farms
1974	105,000	187	19,600,000
1989	81,000	217	17,600,000
1998	78,000	210	16,400,000
2002	77,131	204	15,741,552
2007	78,463	194	15,190,804

The table shows a decrease of 4,409,196 acres over this 28 year period of time, which is a 22% decrease in farmland. This number is very comparable with what happened with farmland in Buffalo County based on percentage. So where did the farmland go? Better question than that is where will we plant the crops that we need to feed the milk cows and beef cattle and generate the by-products that are used from agricultural cropping. The second question relating to the loss in farmland state wide, will there be enough farmland to produce the food we need for the people who live here?

The following map shows land cover in Buffalo County. Unfortunately this is just a pictorial representation; text relative to this map is not available and therefore the acreage associated with each crop is not available. This map is designed to show that land use is agriculture and mostly woodland.



The map is created from satellite images depicting agricultural land cover. The images are a useful tool for monitoring crop rotation patterns, land use changes, and water resources, when comparing maps from different years.

Following is a table showing the breakdown of the cropland acres harvested in 2007, compared to 2002.

Crop	2002 (acres harvested)	2007 (acres harvested)
Corn (grain, silage and other)	58,064	66,990
Soybeans	19,940	19,650
Hay (Forage, all uses)	54723	51,177
Oats for grain (bushels)	3,840	2,816
Barley for grain	729	433
Wheat for grain	288	134
Rye for grain	178	295
Other – which would include such crops as potatoes and vegetables	Not available	17,578

Forestry

Total Forestland in Buffalo County is 168,000 acres or 48% of the county. There are no County, State or National Forest lands located in Buffalo County. The forest lands (woodland) in Buffalo County is all privately owned.

Of the acres of forestland in the county, ~ 75,600 acres are enrolled in the Managed Forest Tax Program. Only ~1,189 of the Managed Forest Tax Law acres are open to the public for such activities such as fishing, hunting, cross country skiing and sightseeing.

State Parks

Located along the lazy Mississippi River north of Fountain City, the 322-acre Merrick State Park is popular with anglers and boaters. The marshy backwaters are home for egrets, herons, muskrats and otters. A wooden stairway provides access to the river.

At Merrick State Park you can enjoy camping, canoeing, hike and snowshoeing on miles of trails, fishing, watch and photograph spring and fall migrations of waterfowl and eagles and occasional naturalist programs, sponsored by the TURTLES. The park has picnic areas along the Mississippi River. One near the lower boat launch is open to leashed pets. Three shelter throughout the park are reservable.

TURTLES is a non-profit organization that raises money for special programs and provides volunteers to help you enjoy your stay at the park.

State Wildlife Areas

Public lands managed by the Wisconsin Department of Natural Resources provide many opportunities and public spaces for you and your family to hunt, fish, trap, hike, canoe, or watch or photograph wildlife. All wildlife areas are managed to sustain the wildlife and natural communities found on the properties and to provide a full range of traditional outdoor recreational uses. DNR State Wildlife Areas will provide you with the outdoor adventure you can only find in Wisconsin.

Three State Wildlife Areas are located in Buffalo County, Big Swamp, Tiffany Wildlife and Whitman Dam. They are explained in more detail in the following paragraphs.

Big Swamp Wildlife Area. Acquisition of this property began in 1956 with the goal of protecting winter pheasant cover for pheasants. The Big Swamp WMA has since grown to 844 acres in size. Management on the property is limited as much of the acreage consists of tamarack swamp and lowlands, although there is a mix of upland hardwoods on the property.

Recreational opportunities in Big Swamp Wildlife Area include of hunting (rabbits, squirrels, deer), trapping, hiking wildlife viewing and bird watching.

The property is located 5 miles west of Mondovi south on Highway 10. Currently access is only available from County Highway A on the south side of the property.

Tiffany Wildlife Area. Tiffany Wildlife Area has a diversity and abundance of wildlife on more than 13,000 acres. The area contains one of the state's largest, continuous bottomland hardwood forests. Timber harvests help maintain aspen and oak in a diverse pattern of size and age classes. This variety in woodland composition and structure provide food and shelter for a wide variety of wildlife including deer, ruffed grouse and beaver. Dead trees with dens are left to provide wildlife homes. Oaks with superior potential for producing acorns are preserved to provide nutritious high energy wildlife food.

DNR staff periodically mow and use controlled burning to maintain meadow and grassland habitat at Tiffany Wildlife Area for waterfowl nesting cover and a number of other upland birds. Burning also maintains native prairie and savannah plants that existed before white settlement.

Beaver dams on sloughs and old river meanders create a maze of ponds and wetlands. Hand-made wood duck houses dot wetland habitat to help maintain these birds.

Recreational opportunities in the Tiffany Wildlife Area include hunting (deer, ruffed grouse, turkey, squirrel, waterfowl), trapping (beaver and otter are protected from trapping in an 8,000-acre closed area), hiking (trails not marked), cross country skiing (trails not marked), berry picking, canoeing, rafting, camping (by permit only) primitive camping only, no developed sites), wildlife viewing and bird watching.

The property is located 45 minutes south of Eau Claire and 90 minutes north of LaCrosse, along the Chippewa River between Nelson and Durand on the west side of Highway 25 and mostly north of State Highway 35. About 1/6 of the property lies west of the Chippewa River in Pepin County. The rest lies east of the Chippewa River in Buffalo County.

Whitman Dam Wildlife Area. The Whitman Wildlife Area was established in 1965 through a donation of 1,257 acres of land made to the State of Wisconsin by John Latsch in 1919. Whitman Dam Wildlife now is an area of 2,253 acres. Latsch donated the land to be used by citizens of Wisconsin for outdoor recreational activities. In 1936 the US Corps of Engineers installed Lock and Dam #5 which tied into the north end of the Whitman Dam Wildlife Area. Since the construction of the dam three culverts have been installed that allow water to flow through the wildlife area. Management on the property is limited to boundary posting and fish and wildlife population surveys.

Recreational opportunities in the Whitman Dam Wildlife Area include hunting (rabbits, squirrels, deer, ducks, geese and turkey), trapping, hiking, wildlife viewing and bird watching.

The property is located 3 miles southeast of Cochrane across the main river channel from Merrick State Park. Access available from Merrick State Park or at the end of Whitman Dam Road west of Kamrowski road. The property consists of floodplain forest and marshland.

Farmland Preservation Program – Working Lands Initiative

Wisconsin's Farmland Preservation Program provides tax relief to landowners who participate in the program and maintain their land in agricultural use. This program provides a tax credit when the individual files their income taxes based on their agricultural income and their real estate taxes.

Landowners who participate in the Farmland Preservation Program in Buffalo County sign a fifteen and/or twenty-year agreement. The program is administered by the Land Conservation Department pursuant to Wis. Stats. Chap. 91 & 92, ATCP 50 and the Buffalo County Farmland Preservation Program Soil and Water Conservation Policy. This policy was updated in April 2005 to provide that soil and water conservation standards be met and procedures be followed by participants in the program. Landowners are subject to these standards only if they submitted an agreement to the county after April 2005. All other participants are required to meet the requirements that were in place when they enrolled in the program.

The update required that all participants in the Farmland Preservation Program implement soil and water conservation standards, according to a schedule of compliance approved by the Land Conservation Committee, on all lands for which the participant claims farmland

preservation tax credits. The standards to be implemented are those required under ATCP 50.04, Wis. Adm. Code.

At the end of 2009 there were 135 Farmland Preservation Program participants, with a total of 33,364.4 acres enrolled in the program. By the end of 2011 there will only be 100 agreements and 27,479.8 acres enrolled in the program. In the mid 90's there were as many as 458 contracts in Buffalo County and ~ 93,000 acres enrolled in the program. Landowners have been entering into agreements to participate in the program since the mid 80's.

Buffalo County does not have Farmland Preservation (Exclusive Ag) Zoning. For landowners in Buffalo County to participate when their existing agreements expire, they will need to have an area designated as an agricultural enterprise area (AEA).

An AEA is a contiguous land area devoted primarily to agricultural use and locally targeted for agricultural preservation and development. The designation of an AEA by the state is based on a voluntary local application. Owners of at least 5 eligible farms and any affected local governments may petition to establish an AEA. Once an AEA has been established, any landowner in that AEA will be eligible to enter into a Farmland Preservation Agreement.

Manure Storage Ordinance

Buffalo County recognizes the need to regulate the location, design, construction, alteration, closure and use of manure storage facilities. Buffalo County approved their initial Manure Storage Ordinance in March 1994. In a response to the DNR Runoff rules, passed in October of 2002, the Land Conservation Department and Land Conservation Committee updated the ordinance to implement those rules through the ordinance. The revision and update to the Buffalo County Manure Storage Ordinance was approved by resolution by the Buffalo County Board of Supervisors in August 2007 and is administered by the Buffalo County Land Conservation Department.

Updates to the ordinance include the agricultural performance standards and prohibitions as spelled out in ATCP 50. It also included any updates and/or revisions to Natural Resource Conservation Service (NRCS) standards and specifications that are referenced in the ordinance. A copy of the Buffalo County Manure Storage begins on page 77 of this plan.

Since the plan was updated, seven permits have been issued for construction of new manure storage facilities. The purpose of the Buffalo County Manure Storage Ordinance is to regulate the location, design, construction, installation, alteration, closure and use of manure storage facilities and the land application of wastes from those facilities. NR 151 can only be enforced in this ordinance as it applies to manure storage facilities.

Non-Metallic Mining Reclamation Ordinance

Buffalo County recognizes the importance and need for non-metallic mining operations and also recognizes the importance of proper reclamation to those sites once mining has ceased. The ordinance is administered by the Zoning Department in Buffalo County.

Stormwater Discharge Permit – Wis. Adm. Code NR 216

Under subchapter III of NR 216, Wis. Adm. Code, a notice of intent shall be filed with the DNR by any landowner who disturbs one or more acres of land. This disturbance can create a point source discharge of storm water from the construction site to waters of the state and is therefore regulated by DNR. Agriculture is exempt from this requirement for activities such as planting, growing, cultivating and harvesting of crops for human or livestock consumption and pasturing or yarding of livestock as well as sod farms and tree nurseries. Agriculture is not exempt from the requirement to submit a notice of intent for one or more acres of land disturbance for the construction of structures such as barns, manure storage facilities or barnyard runoff control systems. (See s.NR216.42(2)), Wis. Adm. Code.) Furthermore, construction of an agricultural building or facility must follow an erosion control and sediment control plan consistent with s.NR 216.46, Wis. Adm. Code and including meeting the performance standards of s.NR 151.11, Wis. Adm. Code.

An agriculture building or facility is not required to meet the post-construction performance standards of NR 151.12, Wis. Adm. Code., however construction of the building and/or facility must meet the agricultural performance standards and prohibitions under Chapter NR 151.

4. Objectives, Actions & Goals.

The Buffalo County Local Advisory Committee (LAC) played a lead role in the workplan for the Land and Water Plan. Two questions in particular, were part of the thought process for the committee; 1) What are the most important resource concerns of the county, 2) What activities should the conservation staff be doing over the next (5) five years to address them.

Two resource concerns were identified, 1) Reduce Soil Erosion (and sedimentation to the streams) and 2) Raise Awareness for Nutrient and Manure Management. The LAC did not want to identify either of these in a rank of higher to lower priority and wanted to see them both addressed at a parallel level. They did however understand the necessity of ranking each activity in the workplan to reach their goals. The LAC, understanding some of the challenges in meeting these goals with the soils and topography of Buffalo County, so it was also important for them to identify specific challenges with each action, and bring awareness on why some of these goals may not be met.

The objectives and actions to achieve the goals from the workplan are as follows:

Objective - Reduce Soil Erosion

- **Reduce Gully Erosion**
 - Survey and Design Grade Stabilization Structures on a voluntary basis where cost share funds are provided
 - Survey and Design Grade Stabilization Structures on a voluntary basis where no cost share funds are provided
 - Identify high priority/critical sites for compliance
- **Reduce Sheet & Rill and Ephemeral Erosion**
 - Complete Conservation Plans
 - Complete one-on-one farm visits with landowners
 - Survey and design waterway systems on a voluntary basis with cost share funding
 - Survey and design waterway systems on a voluntary basis with no cost share funding
 - Identify high priority/critical sites for compliance
 - Complete Transect Survey
 - Complete cross-compliance spotchecks with NRCS
- **Reduce Streambank Erosion**
 - Survey and design streambank protection practices on a voluntary basis with cost share funding
 - Survey and design streambank protection practices on a voluntary basis with no cost share funding
 - Identify high priority/critical sites for compliance

Objective – Raise Awareness for Nutrient and Manure Management

- **Manure Spills**
 - Provide awareness on the need for liquid manure haulers to complete and keep with their hauling equipment, a “Response Guide for Manure Spills and Run-off. See copy on pages 69 & 70.
- **Soil Sampling**
 - Encourage soil sampling on a regular basis where there is no cost share funds for a formal nutrient management plan
- **Manure Storage**
 - Complete farm visits and work cooperatively with landowner installing manure storage for compliance with the Buffalo County Manure Storage Ordinance

- **Manure Spreader Calibration**
 - Encourage farmers to have their manure spreaders calibrated
- **Manure Spreading**
 - Promote Nutrient Management Planning by holding farmer training for nutrient management plan writing
 - Encourage landowners to write their own nutrient management plans
 - Provide spreading restriction maps to landowners and explain how helpful they are when nutrient management planning
- **Barnyard Runoff**
 - Survey and design barnyard runoff control practices on a voluntary basis with cost share funding
 - Survey and design barnyard runoff control practices on a voluntary basis with no cost share funding
 - Identify high priority/critical sites for compliance
 - Identify alternatives to solve barnyard runoff
 - Survey and design roof runoff system on a voluntary basis with no cost share funding
 - Survey and design clean water diversions on a voluntary basis with no cost share funding
 - Assist landowners with proper placement of manure stacks for compliance

Objective – Use the State Agricultural Performance Standards and Prohibition Laws to Secure Conservation Improvements Where Needed.

- **Increase Farmer Awareness of State Agricultural Performance Standards and Prohibitions**
 - Complete farm visits on a voluntary basis
 - Complete farm visits for issues of non-compliance
- **Help Farmers Identify Where Compliance Has Been Achieved**
 - Complete farm visits on a voluntary basis
 - Complete farm visits for issues of non-compliance
 - Document compliance in letters to landowners.
- **Work With Priority Farms That Do Not Meet Compliance**
 - Complete farm visits for issues of non-compliance
 - Discuss with landowners non-compliance and explain the law so they better understand their responsibilities and opportunities available for compliance

The full two-year workplan begins on page 43.

5. Implementation

This plan will address the strategy for implementation of the NR151 performance standards to assure landowners are in compliance with the state mandated regulations. The following table identifies the performance standards that will need to be implemented and the table on page 74 identifies the best management practices that may be used to achieve compliance.

The Agricultural Performance Standards and Prohibitions are identified as follows:

NR 151 Agricultural Performance Standards	
	<ul style="list-style-type: none"> • Control cropland erosion to meet tolerable rates
	<ul style="list-style-type: none"> • Tillage setback from waterbody in agricultural field
	<ul style="list-style-type: none"> • Build, modify, or abandon manure storage facilities to accepted standards
	<ul style="list-style-type: none"> • Divert clean runoff away from livestock and manure storage areas located near streams, rivers, lakes or areas of susceptible to groundwater
	<ul style="list-style-type: none"> • Apply manure and other fertilizers according to an approved nutrient management plan
	<ul style="list-style-type: none"> • Phosphorus index shall average 6 or less on croplands, pastures and winter grazing areas over the accounting period and not exceed 12 in any individual year within the accounting period
Manure Management Prohibitions	
	<ul style="list-style-type: none"> • No overflow of manure storage facilities
	<ul style="list-style-type: none"> • No unconfined manure piles near waterbodies
	<ul style="list-style-type: none"> • No direct runoff from feedlots or stored manure into state waters
	<ul style="list-style-type: none"> • No streambanks or shorelines trampled by livestock

Voluntary Strategy

Land Conservation Department will work primarily with landowners on a voluntary basis. The LCD staff will respond to daily contacts from landowners seeking technical and cost share assistance. Landowners that contact our office on a voluntary basis will be given priority for site visits and technical assistance. During the site visit, LCD staff will identify the best way to address the resource concerns, which may include the installation of a conservation practice. The “Farmstead/Cropping Assessment Checklist” form will be used to determine the status of compliance with NR 151 performance standards and prohibitions. A copy of this form is on page 76 of the plan. “Landowner Commitment to Install Conservation Practices” form will be used to determine their eligibility for cost share funding and necessary corrective measures, including cost estimates. It will also serve as a tool for landowners to tentatively commit funds as the necessary match to a cost share grant. All compliance information will be kept and maintained by the LCD.

Priority Farm Strategy

Critical sites and Priority Farms were discussed with the Local Advisory Committee. These sites and farms are those that (not in any specific order):

- Farms in watersheds draining to DNR listed as Impaired Water (303(d))
- Farms that have significant manure management problems
- Soil Erosion exceeding “T” (tolerable soil loss)
- Cropping on slopes greater than 12% (and where soil erosion exceeds “T”)
- Barnyard Runoff from feedlot
- Winter spreading on restricted fields (based on the DATCP spreading restriction maps)
- Complaints (anonymous or other)

Significant runoff and manure management problems will be those sites that contribute more than 15 pounds of phosphorus from a barnyard or feedlot.

For the priority farm and critical sites, LCD staff will conduct a site visit with the landowner and complete a “Farmstead/Cropping Assessment to determine NR 151 compliance status, which is the same form that is used for site visits on a voluntary basis. This assessment will be discussed with the landowner. Information from this site visit will be documented and shared with the DNR regional Water Basin leader or his designee. If a landowner is willing to work with the LCD on a voluntary basis, the LCD will use the “Landowner Commitment Form to Install Conservation Practices” and use the voluntary strategy as described above to address the resource concerns.

Non-Compliance Strategy

When a determination has been made that a livestock facility is not in compliance with a livestock performance standards or prohibition or croplands are not in compliance with a cropland performance standard and the landowner is unwilling to cooperate with the LCD voluntarily, the DNR Basin Leader or his/her designee will make a determination of cost share eligibility. If it is determined that the landowner/operator is eligible for cost sharing, a letter will be sent to the landowner by certified mail from the LCD office and coordinated with the Basin Leader or his/her designee. The letter will include a description of the violation and a determination as to which conservation practice(s) or other corrective measures that are needed to comply with performance standards that are eligible for cost sharing. This letter will include an offer for cost sharing and provide or coordinate the provision for technical assistance. The letter will explain possible consequences if the landowner/operator fails to comply with the provisions of the notice. A compliance period will need to be established between the landowner/operator, LCD staff and coordinated with the Basin Leader or his/her designee as provided in NR151. The procedure for notification or noncompliance when no eligible costs are involved is much the same as when cost share is required, however the compliance provisions in NR151 may be less.

The LCD staff intend to secure cost share funds for eligible conservation practices as needed and provide technical assistance for design and implementation of those conservation practices. We will also provide technical assistance in those areas where no cost share is available within the guidelines of service that we can provide to landowners/operators as employees of the county conservation office.

Appeals Process for Landowner/Operator Determinations

Any person aggrieved by a decision of the Buffalo County LCD office may file a written appeal of the decision with the Buffalo County Land Conservation Committee (LCC), P.O. Box 88, Alma, WI 54610, within 30 days of the date of the letter to the landowner/operator of the DNR's decision. The appeal will be heard by the LCC, no later than 60 days of the date of appeal request.

Enforcement

Enforcement of actions associated with NR151 will be coordinated with the DNR Basin Leader or his/her designee. If a landowner/operator refuses technical and/or financial assistance and continues to remain in non-compliance with the state performance standards, the LCD office will forward all compliance information to the Basin Leader or his/her designee. Basin Leader or his/her designee will distribute work to appropriate DNR staff. The DNR will provide notice to the landowner/operator and the LCD office prior to initiating enforcement action. Notification is not required if the site is imminent threat to public health or fish or aquatic life pursuant to NR151.09. The DNR contact is the County Conservationist in Buffalo County.

Budget

Buffalo County Land Conservation Department identified the reduction of soil erosion as an objective in their plan. Certain conservation practices were identified that will be used in implementation. The DATCP LWRM cost share grant funds, typically fund conservation practices that will reduce soil erosion. The DNR TRM cost share grant program is used to fund barnyard runoff control systems, manure storage facilities and other resource concerns relating to animal waste and manure management. 2010 is the first year that the LCD received cost share funding from DATCP for nutrient management planning.

The LCD office works directly with the NRCS office and when a landowner is looking for cost share funds and contacts the LCD office, we encourage them to apply for funds through the federal EQIP as well.

Following is a budget to show costs associated with the implementation of the Buffalo County Land and Water Resource Management Plan. The categories are based on the individual actions in the workplan where direct costs can be associated with an action. The workplan was written based on the equivalent hours for 3-full time staff in the Land Conservation Department office and a minimum of \$60,000 of DATCP cost share grant

funds and the continuation of the DNR Targeted Runoff Management (TRM) Grant Program.

Cost Share Funding necessary for implementation of the plan as written.

Action	Average cost 2008-2010	Actual Funding Costs in 2009	Estimated Costs 2012 - 2013	Total Cost for 10 Year Plan
Grade Stabilization Structures	\$ 3,788/structure	\$ 40,020.21	\$ 45,456.	\$ 454,560.
Waterway Systems	\$ 1,890./acre	\$ 8,785.00	\$ 9,450.	\$ 94,500.
Streambank Protection – Rock Riprap	\$ 35./linear foot	\$ 13,558.75	\$ 12,629.	\$ 126,290.
Streambank Protection – Shaping & Sloping	\$ 4.33/linear foot			
Roof Runoff System	\$ 15./linear foot	0.00	\$ 3,000.	\$ 30,000.
Barnyard Runoff Control System	\$ 23,924/farm & an average of 70 dairy cows /farm	\$ 63,839.26	\$ 47,848.	\$ 474,840.
Manure Storage	Max at \$150,000/farm	0.00	\$ 150,000	\$ 1,500,000

Staff Funding necessary for implementation of the plan as it is written.

2010 Costs <u>2.5 staff *</u>	2011 Estimated Costs – <u>2.7 staff</u>	Total Cost for 10 year plan based <u>on current salary – 3.0 staff</u>
\$ 168,360.	\$ 178,874.	\$ 1,905,675.

*Estimate only. Final 2010 reports were not available when budget for plan was completed.

Work Plan

Financial Resources	Priority	Lead Agency	Monitoring Tool	Challenges to Meeting Goal	Accomplishment
County Levy – for staff and operating expenses – maintain 3 staff in the LCD	High	LCD	Amount of funds provided from county levy	Insufficient funds to maintain staff at full-time status	
DATCP – Staffing Grant – Full funding for LCD offices – statewide	High	LCD	Amount of funds provided from DATCP for County Conservation Activities	Lack of fund availability	
Other staff and operating funds sources	High	LCD	Source and amount of funds	No additional sources of funds, lack of funds available	
DATCP Cost Share Grant Program – at a minimum of \$60,000 annually	High	LCD	Cost Share funds from DATCP for Conservation Practice Construction	Lack of fund availability	
DNR Targeted Runoff Management Cost Share Grant Program	High	LCD	Cost Share funds through the DNR TRM Program for conservation practice construction	Lack of sufficient funds for all eligible grant applications	
Other Cost Share Funding Sources	High	LCD	Source and amount of funds	No additional sources of funds, lack of funds available.	
Objective – Reduce Soil Erosion					
Reduce Gully Erosion					
Survey and design (12) grade stabilization structures (ATCP 50.73) to address resource concerns on a voluntary basis – where cost share funds are provided	High	LCD	# of landowners assisted, soil loss savings, cost share dollars spent ⁽¹⁾ { ² }	Possibility of limiting manure spreading in drainage area following construction of a structure. No landowner requests and/or no cost share funds available	
Survey and design (12) grade stabilization structures (ATCP 50.73) to address resource concerns on a voluntary basis – where no cost share funds are provided	High	LCD	# of landowners assisted, soil loss savings, cost share dollars spent ⁽¹⁾ { ² }	Possibility of limiting manure spreading in drainage area following const. of a structure. No landowner requests and/or no cost share funds available	

¹ Soil Loss Savings will be calculated using the "Concentrated Flow Soil Loss Worksheet".

² Information will be documented on hard copy files and spreadsheet tracking will be created pending staff availability.

Objective – Reduce Soil Erosion					
Reduce Gully Erosion					
	Priority	Lead Agency	Monitoring Tool	Challenges to Meeting Goal	Accomplishment
Identify (2) “high” priority/”critical sites”. Make landowner contacts, complete a farmstead assessment and prioritize conservation practices for compliance with NR 151	High	LCD, DNR, DATCP (Eng. Staff)	# of landowners assisted and # of assessments completed ⁽³⁾ { ⁴ }	Lack of sites and/or staff availability	
Reduce Sheet & Rill and Ephemeral Erosion					
Complete (1,000 acres) of Conservation Farm Plan updates to “T”	High	LCD & NRCS	# of farm plans and acres of planning completed to “T” { ⁴ }	Staff availability, inaccurate yield number for planning purposes (high yield reflect lower “T” value)	
Complete (50) one-on-one farm visits with landowners	High	LCD & NRCS	# of farm visits, documentation of visit { ⁴ }	Staff availability to meet the need of all the requests	
Survey and design (5 acres) of grassed waterway systems (ATCP 50.96) to address resource concerns on a voluntary basis where cost share dollars are provided	High	LCD	# of landowners assisted, soil loss savings ⁽³⁾ { ⁴ }	Possibility of waterway to be identified as an intermittent stream following construction. No landowner requests and/or no cost share funds available	
Survey and design (5 acres) of grassed waterway systems (ATCP 50.96) to address resource concerns on a voluntary basis where no cost share dollars are provided	High	LCD	# of landowners assisted, soil loss savings ⁽³⁾ { ⁴ }	Possibility of waterway to be identified as an intermittent stream following construction. No landowner requests	
Identify (1) “high” priority/”critical sites”. Make landowner contacts, complete a farmstead assessment and prioritize cons. practices for compliance with NR 151	High	LCD, DNR, DATCP (Eng. Staff)	# of landowners assisted and # of assessments completed ⁽³⁾ { ⁴ }	Lack of sites and/or staff availability	
Complete Transect Survey	High	LCD	Complete reports and report results to LCC	Staff availability	
Complete (10) cross-compliance spotchecks with NRCS	Med.	LCD & NRCS	# of spotchecks completed { ³ }	Staff availability	

³ Information will be documented on hard copy files and spreadsheet tracking will be created pending staff availability.

Objective – Reduce Soil Erosion					
Reduce Streambank Erosion					
	Priority	Lead Agency	Monitoring Tool	Challenges to Meeting Goal	Accomplishment
Survey and design (200 LF) of Streambank protection (ATCP 50.65, 50.75 or 50.88) conservation practices to address resource concern on a voluntary basis where cost share funds are provided	High	LCD	# of landowners assisted, soil loss savings, cost share dollars spent ⁽⁵⁾ { ⁴ }	No landowner requests and/or no cost share funds available	
Survey and design (200 LF) of Streambank protection (ATCP 50.65, 50.75 or 50.88) conservation practices to address resource concern on a voluntary basis where no cost share funds are provided	High	LCD	# of landowners assisted, soil loss savings, cost share dollars spent ⁽⁵⁾ { ⁶ }	No landowner requests.	
Identify (2) “high” priority/”critical sites”. Make landowner contacts, complete a farmstead assessment and prioritize conservation practices for compliance with NR 151	Med.	LCD, DNR, DATCP (Eng. Staff)	# of landowners assisted and # of assessments completed { ⁵ }	Lack of sites and/or staff availability	
Streambank protection and in-stream restoration for habitat improvement. Continue to work with the County Conservation Club and individual Sportsmen and Rod & Gun Club Groups in the county.	Med.	LCD, NRCS, DNR, UW-Ext.	# of linear feet of protection, # of in-stream practices completed and # of project sites worked at	Lack of sites, landowner, conservation groups and or staff availability	
Objective – Improve Awareness for Nutrient and Manure Management					
Manure Spills					
Encourage (10) farmers who do any level of manure hauling to complete a “Response Guide for Manure Spills and Run-off” Form. (See page ____ of the plan for an example.)	High	LCD, NRCS, UW-Ext.	# of farmers completing the Response Guide for Manure Spills and Run-off. { ⁵ }	Not enough knowledge of who the landowners are that should be using the guide, staff availability	
Soil Sampling					
Encourage (6) landowners to complete soil testing on a regular basis where there is no formal nutrient management plan	High	LCD, NRCS, UW-Ext.	# of farmers completing soil testing, amount of staff time (in hours) spent { ⁵ }	Farmer understanding purpose, cost of sampling staff availability	

⁴ Soil Loss Savings will be calculated using the “Concentrated Flow Soil Loss Worksheet”.

Objective – Improve Awareness for Nutrient and Manure Management						
Manure Storage	Priority	Lead Agency	Monitoring Tool	Challenges to Meeting Goal	Accomplishment	
Make (3) farm visits, review designs in cooperation with DATCP engineering field office staff and issue permits to construct new manure storage facilities in accordance with the Manure Storage Ordinance	Med	LCD, DATCP, (Eng. Staff)	# of landowners building manure storage facilities ⁽⁵⁾	No permit requests		
Manure Spreader Calibration						
Encourage (6) farmers to calibrate their spreaders to gain better knowledge of their spreading level	High	LCD, NRCS, UW-Ext.	# of spreader calibrated ⁽⁷⁾	Lack of requests for this service, staff availability		
Manure Spreading						
Promote the use of nutrient management plans – hold (2) training sessions to encourage (6) landowners to write their own nutrient management plan	High	LCD, NRCS, UW-Ext.	# of training session held, # of landowners attending ⁽⁷⁾	Landowner interest, landowner commitment to complete plans, staff availability		
Promote the use of nutrient management plans - encourage (4) landowners to write their own nutrient management plans or have one written by a private consultant	High	LCD, NRCS, UW-Ext.	# of plans written or submitted and # of acres of plans ⁽⁷⁾	Cost and/or time to the landowner when it is not required – landowner not providing a completed plan to LCD or NRCS		
Provide information on spreading restriction maps from DATCP web site. Help (12) landowners learn how the maps can be helpful when manure spreading	High	LCD, NRCS, UW-Ext.	# of landowners assisted ⁽⁷⁾	Spreading restrictions on land where grade stabilization structures have been built (drainage areas), lack of landowner requests, staff availability		
Barnyard Runoff						
Survey and design (1) barnyard runoff control system (ATCP 50.64) to address resource concern on a voluntary basis where cost share funds are provided	Med	LCD	# of landowners assisted, reduction of phosphorus loading to stream (BARNY), cost share dollars spent ⁽⁷⁾	Lack of landowner requests and/or no cost share funds available		
Survey and design (1) barnyard runoff control system (ATCP 50.64) to address resource concern on a voluntary basis where no cost share funds are provided	Med	LCD	# of landowners assisted, reduction of phosphorus loading to stream (BARNY), cost share dollars spent ⁽⁷⁾	Lack of landowner requests.		

⁵ Information will be documented on hard copy files and spreadsheet tracking will be created pending staff availability.

Objective – Improve Awareness for Nutrient and Manure Management					
	Priority	Lead Agency	Monitoring Tool	Challenges to Meeting Goal	Accomplishment
Identify (2) “high” priority/”critical sites”. Make landowner contacts, complete a farmstead assessment and prioritize conservation practices for compliance with NR 151	Med.	LCD, DNR, DATCP (Eng. Staff)	# of landowners assisted and # of assessments completed ⁽⁶⁾	Lack of sites and/or staff availability	
Identify (2 sites) alternatives to a barnyard runoff control system	High	LCD, DNR, DATCP (Eng. Staff)	# of sites assessed for this activity, # of sites where alternative practices were used ⁽⁸⁾	Lack of landowner interest in alternative, lack of funding if cost share assistance is required	
Survey and design (2) roof runoff systems to divert runoff from roofs away from existing structures or contaminated areas on a voluntary basis as a stand-alone practice or in conjunction with barnyard runoff control system	Med.	LCD, DNR, DATCP (Eng. Staff)	# of landowners, # of systems installed with and without cost share funds ⁽⁸⁾	Lack of landowner interest and cost share fund availability if cost share funding is required	
Survey and design (2) clean water diversions to divert water away from farmsteads, agricultural waste systems and other improvements on a voluntary basis	High	LCD, DNR, DATCP (Eng. Staff)	# of landowners assisted, # of diversions constructed ⁽⁸⁾	Lack of landowner interest and cost share fund availability if cost share funding is required	
Address placement of manure stacks. Assist (2) landowners to properly place manure stacks	Med	LCD, DNR, DATCP (Eng. Staff)	# of landowners who contacted the LCD office for guidance, # of landowners receiving technical assistance for non-compliance ⁽⁸⁾	Landowner not seeking technical assistance	
Other Soil Erosion Activities					
Woodland Erosion	Priority	Lead Agency	Monitoring Tool	Challenges to Meeting Goal	Accomplishment
Trails and landings – seeding on a voluntary basis. Work with (2) individual landowners	Med	LCD & DNR Forester	Encourage a nice grass cover on trails & landings following forest harvest ⁽⁸⁾	Unable to provide this information to landowners – no request for technical assistance	
Critical area seeding – on a voluntary basis. Work with (2) individual landowners	Med	LCD & DNR Forester	Encourage seeding after forest harvest ⁽⁸⁾	Unable to provide this information to landowners – no request for technical assistance	
Tree and shrub planting – on a voluntary basis work with (2) individual landowners	Med.	LCD & DNR Forester	Replant after forest harvest	Unable to provide this information to landowners – no request for technical assistance	

⁶ Information will be documented on hard copy files and spreadsheet tracking will be created pending staff availability.

Other Soil Erosion Activities						
		Priority	Lead Agency	Monitoring Tool	Challenges to Meeting Goal	Accomplishment
Seeding Logging Trails						
Seeding logging trails following forest harvest. Work with (2) individual landowners	Med	DNR Forester	# of landowners completing this activity, # of road seeded and /or acres of seeding completed	This activity is required only by participants in the MFL on the areas that are subject to soil erosion. Information may not be available to LCD staff.		
Groundwater Quality/Quantity						
List the number, location and classification of large capacity wells in the county and update the list annually from the DNR web site	Med	LCD	Include an update in the annual report to the County Board of Supervisors (7)	Information not available on the DNR web site. Staff availability.		
Objective – Use the State Agricultural Performance Standards and Prohibition Laws to Secure Conservation Improvements Where Needed						
Increase Farmer Awareness of State Agricultural Performance Standards and Prohibitions						
Complete (3) farm visits on a voluntary basis.	High	LCD	# of landowners assisted (9)	This will be addressed on site visits for other purposes as well. Staff availability.		
Complete farm visits for issues of non-compliance	High	LCD	# of landowners assisted (9)	This will be addressed on site visits for other purposes as well. Staff availability.		
Help Farmers Identify Where Compliance Has Been Achieved						
Complete (3) farm visits on a voluntary basis.	High	LCD	# of landowners assisted (9)	This will be addressed on site visits for other purposes as well. Staff availability.		
Complete farm visits for issues of non-compliance	High	LCD	# of landowners assisted (9)	This will be addressed on site visits for other purposes as well. Staff availability.		
Document compliance in letters to landowners	High	LCD	# of landowners assisted (9)	This will be addressed on site visits for other purposes as well. Staff availability.		

⁷ Information will be documented on hard copy files and spreadsheet tracking will be created pending staff availability.

Objective – Use the State Agricultural Performance Standards and Prohibition Laws to Secure Conservation Improvements Where Needed						
Work with Priority Farms That Do Not Meet Compliance						
		Priority	Lead Agency	Monitoring Tool	Challenges to Meeting Goal	Accomplishment
Complete (3) farm visits on a voluntary basis.		High	LCD	# of landowners assisted ⁽⁹⁾	This will be addressed on site visits for other purposes as well. Staff availability.	
Increase Farmer Awareness of State Agricultural Performance Standards and Prohibitions						
		Priority	Lead Agency	Monitoring Tool	Challenges to Meeting Goal	Accomplishment
Discuss with landowners non-compliance and explain the law so they better understand their responsibilities and opportunities available for compliance		High	LCD	# of landowners assisted ⁽⁸⁾	This will be addressed on site visits for other purposes as well. Staff availability	
Other Activities						
PL-566 Structure Maintenance						
Complete annual inspections of 13 structures		High	LCD	# of inspections completed and dates of the inspections ⁽¹⁰⁾	Staff availability	
Complete report of structure inspections and forward to NRCS – Contact NRCS (Eau Claire Area Office) where evidence of structural maintenance is necessary		High	LCD	Report filed in a computer file	Staff availability	
Complete brush cleaning & other maintenance as necessary		High	LCD	Amount of work completed, when and the cost	Staff availability	
Information & Education Activities						
Update and maintain the Land Conservation web page on the Buffalo County web site – e-mail updates of conservation activities on a quarterly basis		Med	LCD	Identify periodic changes to the web site, at least on a quarterly basis	Staff availability	
Maintain a database of e-mail addresses for electronic updates of conservation activities		Med	LCD	# of entries in database and #of times information was sent	Staff availability	
Submit (4) news releases to local papers for conservation information and education purposes		High	LCD	# of news releases that were sent to papers, # of news releases that were printed in papers	Lack of control for news releases to be printed in papers. Staff Availability.	

⁸ Information will be documented on hard copy files and spreadsheet tracking will be created pending staff availability.

Other Activities						
Information & Education Activities						
		Priority	Lead Agency	Monitoring Tool	Challenges to Meeting Goal	Accomplishment
Tree Program – promote tree planting. Sell 5,000 trees/shrubs to 40 landowners		Med	LCD	# of landowners purchasing trees, number of trees purchased	Lack of landowner interest. Staff availability.	
Rain Barrel Program – promote water conservation. Sell (10) rain barrels		Med	LCD	# of presentations and # of rain barrels sold	Lack of interest. Staff Availability.	
School Presentations & Field Tours. Provide (4) school presentations and (2) field tours		Med	LCD, NRCS, UW-Ext., DNR	# of presentations, age group, topic of discussion	Lack of school interest. Staff availability.	
Booth at the County Fair		Med	LCD, NRCS, UW-Ext., FSA	Number of days at fair and items of interest	Lack of funding for booth rental. Staff availability.	
Conservation Speaking Contest. Encourage (8) students to participate in three divisions.		Med	LCD	# of students participating in each level	Lack of participants.	
Report at two Farm Bureau Board of Directors Meetings of Conservation Activities		Med	LCD, NRCS, UW-Ext., FSA	# of meetings attended, topic of discussion	This generally happens under most circumstances.	
Meet with County Conservation Groups twice a year.		Med	LCD, NRCS, UW-Ext., DNR	# of meetings attended, topic of discussion	Time of meetings. This generally happens under most circumstances.	
Prepare an Annual Report for the County Board of Supervisors		High	LCD	Report of annual activities in the LCD office	This item is required to be completed.	
Prepare an Annual Accomplishment Report for DATCP & DNR		High	LCD	Dates of submission and location of hard copy	This item is required to be completed.	
Staff Training						
Maintain trained, experienced staff		High	LCD	Allow staff training as necessary. # of training events attended and description of each event	Lack of training funds for cost-related training.	
Trained staff – reduce engineering costs to landowners by technicians acquiring additional job approval		Med	LCD	# of conservation practices designed that exceed current job level approval of LCD technicians	Staff availability. Possibility of poor use of staff time due to difficulty of design.	

Existing Programs

Implementation of this plan will incorporate existing and future programs for technical assistance and cost share funding as follows:

Soil and Water Resource Management Program (SWRM) – Department of Agriculture, Trade and Consumer Protection (DATCP), through ATCP 50, will provide funds to a county for staff and support funding for employees. The SWRM program may provide cost share funds to install conservation practices. Land Conservation Department staff allocate the cost share funds to landowners for installation of conservation practices that will reduce soil erosion and phosphorus runoff to streams.

NonPoint Targeted Runoff Management Program (TRM) - Non-Point Targeted Runoff Management Program (TRM) is a WI-Department of Natural Resources (DNR) program where governmental units and tribes can be reimbursed up to 70% of eligible costs associated with installing Best Management Practices (BMPs) to limit or end nonpoint source (runoff) water pollution. Grant awards cannot exceed \$150,000. Grants are made for specific projects and have a 2-year implementation time frame. Examples of eligible projects include: barnyard and feedlot protection practices, design as part of construction, detention ponds, livestock waste management practices, stream bank protection projects, wetland construction.

TRM funding efforts are focused in critical watersheds and lakes where nonpoint source-related water quality problems are most severe and control is more feasible. Projects are selected based on a competitive process until all available funds have been allocated.

Significant changes to the TRM program because of revisions to NR 153 will be effective January 1, 2011. Funding will be provided in 4 categories: 1) Small scale projects for TMDL watersheds, 2) Small scale projects in areas outside TMDL watersheds, 3) Large scale projects in TMDL watersheds, 4) Large scale projects outside TMDL watersheds. Small scale projects are similar to the existing projects \$150,000 caps on grant funds and time frame of 2 years for project completion. Large scale projects will be funded at higher caps up to \$1 million and will include some funding for county staff and will be time frames of 3-4 years. Caps are subject to change as the DNR budget changes.

Notice of Discharge (NOD) – Notice of Discharge (NOD) Project Grants are provided to local units of government (typically counties) by the Department of Natural Resources and the Department of Agriculture, Trade and Consumer Protection. The purpose of these grants is to provide cost sharing to farmers who are required to install agricultural best management practices to comply with Notice of Discharge requirements. Notices of Discharge are issued by the Department of Natural Resources under Chapter NR 243 (Animal Feeding Operations) to small and medium animal feeding operations that pose environmental threats to state water resources. The project funds can be used to address an outstanding NOD or an NOD developed concurrently with the grant award.

Each state agency administers its own NOD project funds. This is because statutory and other administration requirements for the two agencies vary slightly with respect to cost sharing NODs.

Environmental Quality Incentives Program (EQIP) – The Environmental Quality Incentives Program (EQIP) is a voluntary conservation program. It supports production agriculture and environmental quality as compatible goals. Through EQIP, farmers may receive financial and technical help with structural and management conservation practices on agricultural land. EQIP offers contracts for practice implementation from 1 – 10 years.

EQIP in Wisconsin offers financial assistance to help off-set the costs of eligible conservation practices. Incentive payments may also be made to encourage a farmer to adopt land management practices, such as nutrient management, manure management, integrated pest management, or wildlife habitat management. EQIP offers many practices geared to livestock operations of all types.

Conservation Reserve Program (CRP) – The Conservation Reserve Program (CRP) is a USDA Natural Resource Conservation Service (NRCS) program. It is a voluntary program for agricultural producers. Through CRP, you can receive annual rental payments and cost-share assistance to establish long-term, resource conserving covers on eligible farmland.

The Commodity Credit Corporation (CCC) makes annual rental payments based on the agriculture rental value of the land, and it provides cost-share assistance for up to 50 percent of the participant's costs in establishing approved conservation practices. Participants enroll in CRP contracts for 10 to 15 years.

The program is administered through the Farm Service Agency (FSA). NRCS works with landowners to develop their application, and to plan, design and install the conservation practices on the land. County Land Conservation Departments and the Wisconsin Dept of Natural Resources also provide technical support for the CRP.

The CRP reduces soil erosion, protects the Nation's ability to produce food and fiber, reduces sedimentation in streams and lakes, improves water quality, establishes wildlife habitat, and enhances forest and wetland resources. It encourages farmers to convert highly erodible cropland or other environmentally sensitive acreage to vegetative cover, such as tame or native grasses, wildlife plantings, trees, filterstrips, or riparian buffers. Farmers receive an annual rental payment for the term of the multi-year contract. Cost-sharing is provided to establish the vegetative cover practices.

Conservation Reserve Enhancement Program (CREP) – Conservation Reserve Enhancement Program (CREP) is a voluntary program offering financial incentives to help landowners protect and improve water quality. It is a partnership between the USDA Farm Service Agency (FSA), Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP), USDA Natural Resource Conservation Service (NRCS) and

participating county land conservation departments throughout the state. The DATCP administers the state portion of the program and provides funds for incentive and easement payments.

It is an opportunity for Wisconsin landowners to enroll agricultural lands into various practices, which include riparian buffers, filter strips, wetland restorations, waterways and establishment of native grasslands in the grassland project area. There is no waiting period for this program, and there is no competition with other applicants; however, enrollment and eligibility determinations are on a first-come first-serve basis.

The CREP is a strong federal, state and local partnership for conservation and each agency plays a significant role. Following are the roles of each partner in the CREP:

- Farm Service Agency – administers the federal part of the program and makes cost share incentive and rental payments to landowners
- Natural Resource Conservation Service – provides technical assistance to plan and install the conservation practices and certifies that practices are complete
- County Land Conservation Departments – may provide conservation planning certification and monitoring of the easements or agreements
- Department of Natural Resources – will oversee the water quality reporting aspects of the program and other water quality monitoring duties.

On the federal side, USDA Farm Service Agency makes payments annually for up to 15 years, based on the specific soil types on the lands to be enrolled. USDA Farm Service Agency also provides an additional annual federal incentive payment from 35% to 60%, of the annual rental rate, depending on the practices to be installed, and an annual maintenance payment of between \$2 and \$4 per acre per year depending again on the practices installed.

In addition to these payments, the federal government also pays \$100 per acre as an up-front, one-time signing incentive payment (SIP) for filter strips, riparian buffers and grassed waterways enrolled in CRP for the first time.

The State of Wisconsin offers an additional incentive as an up-front, one-time payment of 1.5 times the annual rental rate for 15-year agreements, and 12 times the annual rental rate for perpetual conservation easements. The state payments are made up-front after the agreement or easement is signed by the landowner.

The federal government also pays 50% of the cost of installing the eligible practices. In addition, practices eligible for a SIP are also eligible for an additional 40% federal incentive called a practice incentive payment (PIP). Wetland restorations will receive an additional incentive of 25% of the cost to restore the land's hydrology. In addition, the state pays 20% of the cost of installing eligible practices. Note: You should check with your tax advisor to determine whether or not these payments have any tax consequences for you.

Conservation Stewardship Program (CSP) – The Conservation Stewardship Program (CSP) is a USDA Natural Resource Conservation Service Program. It is a voluntary program that encourages producers to address resource concerns in a comprehensive manner by undertaking additional conservation activities and improving, maintaining and managing existing conservation activities. An application can be submitted at any time during the year. Applications are funded for five year contracts.

Wetlands Reserve Program (WRP) – Wetland Reserve Program (WRP) is a USDA Natural Resource Conservation Program (NRCS). It is a voluntary program to restore and protect wetlands on private property. It is an opportunity for landowners to receive financial incentives to restore wetlands that have been drained for agriculture.

Landowner who choose to participate in WRP may sell a conservation easement or enter into a cost-share restoration agreement with USDA to restore and protect wetlands. The landowner voluntarily limits future use of the land, yet retains private ownership. The landowner and NRCS develop a plan for the restoration and maintenance of the wetland.

The program offers landowners three options: permanent easements, 30-year easements, and restoration cost-share agreements of a minimum 10-year duration.

Wildlife Habitat Incentives Program (WHIP) – The Wildlife Habitat Incentives Program (WHIP) is a USDA Natural Resource Conservation Service (NRCS) program. It is a voluntary program for people who want to develop or improve wildlife habitat on private lands. The WHIP offers technical and financial assistance to help protect, restore, develop and enhance fish and wildlife habitat.

Participants work with NRCS to prepare a WHIP plan of operations, which describes the landowners' goals for improving wildlife habitat, includes a list of practices and a schedule for installing them, and details the steps necessary to maintain the habitat for the life of the cost-share agreement.

WHIP payments help successful applicants with the practice implementation costs. The agreement lasts one year past the last scheduled practice and may be as long as 10 years. Under the agreement, the landowner agrees to implement and maintain the contracted practices and allow NRCS access to monitor the effectiveness of the practices.

Wisconsin Forest Landowner Grant Program (WFLGP) – Wisconsin Forest Landowner Grant Program (WFLGP) is Wisconsin Department of Natural Resources (DNR) program and is administered by the WI-DNR Division of Forestry. It was created to encourage private forest landowners to manage their lands in a manner that benefits the forest resources and the people of the State. WFLGP assists private landowners to protect and enhance their forested lands, prairies, and waters. The program allows qualified landowners to be reimbursed up to 50% of the eligible cost of eligible practices. Maximum cost shares earned set by the state are currently \$10,000 per year.

Private landowners in Wisconsin are eligible for WFLGP funding if they own at least 10 contiguous acres of non-industrial private forest but not more than 500 acres within Wisconsin. Applicants must have a forest stewardship plan in place on their land or be applying to have one prepared through the WFLGP program. Landowners granted WFLGP funding can only be cost shared for non-commercial practices.

Farm and Ranch Lands Protection Program – The Farm and Ranch Lands Protection Program (FRPP) is a USDA Natural Resource Conservation Program. This program keeps productive farmland in privately owned agricultural use by assisting States, Tribes and local government or non-profit entities with the purchase of conservation easements or development rights on productive farmland, and on farms containing significant historical or archaeological resources. Through a cooperative agreement, the NRCS provides up to 50% of the purchase cost for perpetual easements (in Wisconsin) on eligible farmland.

Grassland Reserve Program (GRP) – The Grassland Reserve Program (GRP) is a USDA Natural Resource Conservation Service (NRCS) program. It is a voluntary program for landowners and operators to protect grazing uses and other related conservation values by restoring and conserving eligible grassland and certain other lands through rental contracts and easements. GRP is available on privately owned lands, which includes private and Tribal land. Publically owned land is not eligible. Land already under protection from the conversion to non-grazing uses is not eligible.

The land must be grassland for which the predominant use is grazing, or the land must be located in an area that has been historically dominated by grassland and provide habitat for animal or plant populations of significant ecological value, and contain historical or archeological resources or address issues raised State, Regional and national conservation priorities.

County Conservation Aids – County Conservation Aids grant funds is a WI- Department of Natural Resource (DNR) program. The County Conservation Aids grant program provides financial assistance to enhance county fish and wildlife programs. The Fish and Wildlife Management Grant Program was created to assist Wisconsin Counties in the improvement of the fish and wildlife resources. The fund was established by the Wisconsin Legislature in 1965 as an alternative to highly questionable bounty payments on coyote, foxes and bobcats. Every year the bounty program was cancelled, a state allocation equal to the average bounty payment has been earmarked as matching money for a growing list of county sponsored fish and wildlife habitat projects.

The revenue to operate the program comes from the sale of hunting and fishing licenses and state sales tax on hunting and fishing equipment.

6. Information & Education

One comment that was made at the Landowner Information Meeting in September 2010 that the Local Advisory Committee (LAC) used as a guide when developing the workplan was that there is a Strong Conservation Ethic in this County and we need to promote it. The best way to promote conservation is through Information and Education activities.

A list of Information and Education activities were created that would be used to build awareness on the benefits of applying good sound conservation practices that will in turn reduce sediment lost and nutrient loading. Many of these activities will be completed in cooperation with Natural Resource Conservation Service (NRCS), UW-Extension, and DNR local field office staff.

Examples of these activities include:

- One-on-one farm visits with landowners
- Conservation farm planning
- Manure spill response guide reference
- Assist landowners with soil sampling
- Calibrate manure spreaders
- Barnyard manure management alternative
- Proper placement of manure stacks
- Necessity to seed and/or stabilize erosion following forest harvest
- Prepare reports of accomplishments
- Maintain database of e-mail addresses for quarterly news releases
- Regular new releases to local newspapers
- Tree Program – Promote tree planting
- School tours and in-school presentations
- Booth at the county fair
- Report to Farm Bureau Board of Directors meetings
- Meet with County Conservation Clubs
- Enhance the LCD web page on the Buffalo County Web Site
- Provide LCD training

When completing on-farm visits, a “Farmstead/Cropping Assessment Checklist” form is used to inform landowners of the requirements of the runoff rules, NR151. This form serves two purposes. It makes landowners aware of what the performance standards are and areas where they may not be in compliance with those standards. It also serves as a way to track a landowners level of compliance in an effort to seeking funding sources to bring him into compliance. This form can also be used for critical sites, priority farm visits, farm visits for landowners wishing to build manure storage or barnyard runoff control systems.

7. Monitoring

Monitoring of plan progress is essential and will be completed for a variety of reasons and in a variety of ways. Monitoring will provide information for state and federal agencies, county board members and landowners. Each agency or organization looking for

monitoring results will use this information differently, so it is important that the means we use to gather the data can be useful.

The Land Conservation Department (LCD) keeps a database of conservation practices that are designed and constructed by LCD staff each year, with and without cost share funds. The designs data is kept filed in the office for future reference.

Buffalo County LCD will use the following methods to monitor success of the work completed through the Land and Water Resource Management Plan:

Workplan. The last column of the workplan provides a place to report accomplishments directly related to the workplan. It will also show where we did not meet our plan goals and why.

County Board of Supervisors. Each year county departments prepare an annual report for the County Board of Supervisors and present their report at a regular county board meeting. Part of that report includes an update of the activities and accomplishments from the workplan.

Transect Survey. Each year the LCD office completes the Transect Survey. Results from the Transect survey are presented to the Land Conservation Committee and become part of the Annual Report to the County Board of Supervisors. Transect data has also been presented to other agencies and organizations as requested.

Soil Loss/Saved by the installation of Conservation Practices. The Soil Loss Worksheet is still used in Buffalo County as a means to measure the reduction of soil that is deposited into the waterbodies of Buffalo County. The soil loss worksheet is a mathematical equation that uses the height, width, depth and amount of advancement of a gully for example, in a given year to determine the reduction of soil loss to a particular waterbody from upland, cropland and streambank erosion.

Reduction of direct runoff from feedlots and barnyards. The computer model “Barny” will be used to determine the reduction in phosphorus from barnyards and feedlots through the installation of best management practices.

CREP Environmental Benefit Report Summary. CREP (Conservation Reserve Enhancement Program) Environmental Benefit Report Summary is a tool that uses a formula to calculate three environmental benefits to land that is enrolled in the CREP. By applying this formula, a determination can be made on the pounds of phosphorus, pounds of nitrogen and tons of sediment that are reduced through the enrollment of land in the CREP.

8. Partnerships

Buffalo County Land Conservation Department over the years has historically partnered with the USDA - Natural Resource Conservation Service (NRCS), USDA – Farm Service Agency (FSA), UW-Extension, and Wisconsin DNR. We are fortunate that each of these offices are co-located on the 4th floor of the courthouse in Alma, Wisconsin. This not only makes it extremely easy for the agencies to work together more efficiently, it also is a huge benefit for the landowners to be able to make one stop and visit many offices to meet their conservation and agricultural needs. A “one-stop shop”. The Local Advisory Committee (LAC) regards this as a huge plus in Buffalo County and encourages the agencies to continue to work together.

Through implementation of this plan, existing partnerships will continue and opportunities for new partnerships can be developed. These partnerships will be utilized to best serve the needs of the landowners of the county as we preserve our natural resources.

9. Conclusion

Buffalo County’s LWRM Plan provides the county, and its partners in conservation, a guide to be used to address the various conservation concerns that have been raised by the residents and landowners of Buffalo County. At the same time, it moves toward a common goal of meeting and or exceeding water quality standards that are required by both federal and state governments. The Buffalo County LWRM Plan is not meant to replace any existing conservation programs already in place, but rather work with existing programs to provide one conservation plan for the county.

Buffalo County has a terrain that is breathtaking to the eye, especially looking over the Mississippi River bottoms from one of the many bluffs, but it creates a challenge for the landowner/operator who is trying to farm and make their living. Soil erosion, in general is the number one threat to the largest percentage of streams in the county. Cattle numbers in the county are down significantly, or are moving toward a trend of farms with more cattle numbers and the loss of small dairy farms. There is also a trend of more absentee landowners.

Nutrient and pest management planning is slowly being implemented in the county and progress is made by taking small steps to educate the landowners/operators on the importance of understanding the value of nutrient management planning and using the nutrients they produce on their farm.

Education of the landowners, operators and residents of the county is a “key” component to the success of good county conservation. The county conservation partners, the Land Conservation Department, USDA – Natural Resource Conservation Service, Wisconsin

Department of Natural Resources, UW-Extension and USDA - Farm Service Agency will continue to work cooperatively to provide program services, cost share programs and technical assistance to the landowners of the county as they have in the past. This is easily achieved by having all these offices co-located on the fourth floor of the county courthouse

The plan addresses, objectives and actions, a tool to monitor the action and a method of documentation. There will be challenges to meeting these objectives and it is helpful to know these challenges and face them head on. It is also helpful when the landowners, producers and residents of the county are willing to work with the conservation staff to be able to identify and address the resource concerns in the county. The Buffalo County Land and Water Resource Management Plan is only as useful as the implementation component of it can be accomplished. There will be no road blocks. When we get to a place in the plan that looks like there is nowhere to go, we will construct a new path and find an alternate route.

“Coming together is a beginning; keeping together is a process; working together is success”. ~Henry Ford

ACRONYMS

BMPs	Best Management Practices
CREP	Conservation Reserve Enhancement Program
CRP	Conservation Reserve Program
CSP	Conservation Stewardship Program
DATCP	Department of Agriculture, Trade & Consumer Protection
DC	District Conservationist (USDA – Natural Resource Conservation Service)
DNR	Department of Natural Resources
EQIP	Environmental Quality Incentives Program
FRPP	Farm and Ranch Land Preservation Program
FSA	Farm Service Agency
I & E	Information & Education
LWCB	Land and Water Conservation Board (Wisconsin)
LCC	Land Conservation Committee
LCD	Land Conservation Department
LWRM	Land and Water Resource Management (Plan)
NPS	Non-point Source (pollution)
NOD	Notice of Discharge (pollution)
NRCS	Natural Resource Conservation Service
RC&D	Resource Conservation & Development (River Country)
SWRM	Soil and Water Resource Management (Program/DATCP)
“T”	Tolerable Soil Loss (conservation planning)
USDA	United States Department (of) Agriculture
UWEX	University of Wisconsin - Extension
WALCE	Wisconsin Association of Land Conservation Employees
WFLGP	Wisconsin Forest Landowner Grant Program
WHIP	Wildlife Habitat Incentives Program
WLWCA	Wisconsin Land and Water Conservation Association
WRP	Wetlands Reserve Program

Appendix A

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County of Buffalo
Alma, Wisconsin
Notice of Meeting

**Landowner Information Meeting for the Update to the
Buffalo County Land and Water Resource Management Plan**

Date: Wednesday, October 6, 2010
Time: 7:30 p.m.
Location: 3rd Floor County Board Room, Buffalo County Courthouse

Agenda

Introduction – John Schlesselman, Chairman of the Land Conservation Committee	7:30 p.m.
Overview of the Land and Water Resource Management Plan – Julie Lindstrom, County Conservationist	7:45 p.m.
Natural Resource Conservation Program (NRCS) – Todd Mau, District Conservationist	8:15 p.m.
General Discussion on County Conservation Priorities	8:30 p.m.
Select Local Advisory Committee	
Set Next Meeting Date	

Notice Of Public Hearing

Public Notices

Cochrane-Fountain City Recorder
Cochrane, Wisconsin Thursday, Feb. 10, 2011

NOTICE OF PUBLIC HEARING

Notice is hereby given that the Buffalo County Land Conservation Department/Land Conservation Committee will hold a public hearing on Tuesday, February 22, 2011 at 7:00 p.m. in the Third Floor Board Room at the Buffalo County Courthouse, Alma, Wisconsin.

The purpose of the hearing is to hear comments or suggestions from individuals, landowners, representatives from other agencies to the update to the Buffalo County Land and Water Resource Management Plan. A "Final Draft" copy of the plan is available for review at the Buffalo County Land Conservation Department in the 4th Floor of the County Courthouse, Room 403, between the hours of 8:00 a.m. and 4:30 p.m.

(Feb. 10 & 17, 2011) wnaxlp

NOTICE OF PUBLIC HEARING
LAND AND WATER RESOURCE MANAGEMENT PLAN
BUFFALO COUNTY LAND CONSERVATION COMMITTEE

Notice is hereby given that the Buffalo County Land Conservation Department/Land Conservation Committee will hold a public hearing on Tuesday, February 22, 2011 at 7:00 p.m. in the Third Floor Board Room at the Buffalo County Courthouse, Alma, Wisconsin.

The purpose of the hearing is to hear comments or suggestions from individuals, landowners, representatives from other agencies to the update to the Buffalo County Land and Water Resource Management Plan. A "*Final Draft*" copy of the plan is available for review at the Buffalo County Land Conservation Department in the 4th Floor of the County Courthouse, Room 403, between the hours of 8:00 a.m. and 4:30 p.m. {Publish: February 10th and 17th, 2011 in Cochrane-Fountain City Recorder}

Called by : John Schlesselman, LCC Chairman

Signed: _____
Julie Lindstrom, County Conservationist

County of Buffalo
Alma, Wisconsin
Notice of Public Meeting

Committee: **Buffalo County Land Conservation Committee**
Date: **Tuesday, February 22, 2011**
Time: **5:30 p.m.**
Location: **3rd Floor County Board Room**

Agenda

1. Call to Order/Role Call 5:30 p.m.
2. Approval of Minutes – January 5, 2011 and January 25, 2011 meetings
3. Public Comments Regarding Posted Agenda Items
4. Review/Discuss/Action – Natural Resource Conservation Service
5. Review/Discussion/Action – Farm Service Agency
6. Review Discuss/Action – 2010 Budget Review
7. Review/Discuss/Action – Future Capital Expenditures
8. Review/Discuss/Action – 2012 Budget Discussion & Beyond
9. Review/Discuss/Action – Invoice for Conservation Practice Construction
10. Review/Discuss/Action – 2011 Cost Containment Procedures
11. Review/Discuss/Action – Manure Storage Ordinance
12. Review/Discuss/Action - Wisconsin Land and Water Conservation Association
13. Review/Discuss/Action – River Country Resource Conservation and Development
14. **Review/Discuss/Action – Review of Land and Water Resource Management Plan – Final Copy** 6:45 P.M.
The Land Conservation Committee meeting will recess for the Public Hearing.
- PUBLIC HEARING FOR LAND AND WATER RESOURCE MANAGEMENT PLAN** 7:00 P.M.
- The Land Conservation Committee meeting will reconvene following the Public Hearing**
15. **Review/Discuss/Action – Resolution for Land and Water Resource Management Plan Approval**
16. Review/Discuss/Action – Conservationist Report
17. Review/Discuss/Action – Chairman’s Report
18. Review/Discuss/Action – Next Meeting Date
19. Adjournment

DATE NOTICE WAS FAXED/EMAILED/MAILED AND POSTED: **February 15, 2011**

NOTICE TO: Mailed: Committee Members; **Emailed:** County Clerk’s Office, Brommerich News Service;
Faxed: Alma City Clerk, Buffalo City Clerk, Fountain City Clerk, Mondovi City Clerk

COMMITTEE MEMBERS: If unable to attend, please contact the chairperson of the committee or the county administrators office.

PERSONS WITH DISABILITIES: If you require special accommodations in order to attend this meeting please contact the county administrators office at (608) 685-6234.

PUBLIC ACCESS TO BUFFALO COUNTY COURTHOUSE: The SOUTH Entrance will be the only access to the building after 4:30 p.m.

MEETING CALLED TO ORDER BY: **John Schlesselman, LCC Chairman**

SIGNED:

**Julie Lindstrom, County
Conservationist**

County of Buffalo
Alma, Wisconsin
Notice of Public Meeting

Committee: Buffalo County Committee of Board / Finance Committee
Date: Wednesday, February 23, 2011
Time: 6:30 p.m.
Location: County Board Room, Third Floor, Courthouse, Alma WI

Agenda

20. Call to Order/Roll Call
21. Approval of Previous Committee Meeting Minutes
22. Public Comments Regarding Posted Agenda Items
23. Presentation / Discussion – Overview, Departmental Structure, Duties and Responsibilities
 - Highway
 - Circuit Court
 - County Clerk
24. Review / Discussion / Action – Redistricting in Buffalo County
25. Review / Discussion / Action – Planning for the Future, 2011 and Beyond
 - Duplication of Services Between Departments, Grant Writing, Economic Development
26. Review / Discussion / Action – Buffalo County 2012 Financial Budget, Preliminary Items
27. Review / Discussion / Action – Next Steps and Future Meeting Dates
28. Adjournment of Committee of the Board
29. Review / Discussion / Action – A Resolution to Purchase One 2005 SUV in 2011
30. Review / Discussion / Action – A Resolution for Land and Water Resource Management Plan Approval
31. Review / Discussion / Action – A Resolution to Approve 2011 Payroll Adjustments for the Managerial, Supervisory, Professional and Confidential, Full and Part-time Employees of Buffalo County
32. Review / Discussion / Action – A Resolution to Establish Reimbursement Level of the Chairperson for Performing the Duties of Buffalo County Administrative Coordinator
33. Review / Discussion / Action – A Resolution to Fill Split Deputy / Communication Corrections Officer (Female) Position in Law Enforcement
34. Adjournment

DATE NOTICE WAS FAXED/EMAILED/MAILED AND POSTED: February 18, 2011

NOTICE TO: Mailed: Committee Members; **Emailed:** County Clerk’s Office, Brommerich News Service; **Faxed:** Alma City Clerk, Buffalo City Clerk, Fountain City Clerk, Mondovi City Clerk

COMMITTEE MEMBERS: If unable to attend, please contact the Chairperson of the Committee or the County Administration Office.

PERSONS WITH DISABILITIES: If you require special accommodations in order to attend this meeting, please contact the County Administration Office at (608) 685-6234.

PUBLIC ACCESS TO BUFFALO COUNTY COURTHOUSE: The SOUTH Entrance will be the only access to the building after 4:30 p.m.

MEETING CALLED TO ORDER BY: Del D. Twidt, Chairperson

SIGNED:

Del D. Twidt, Buffalo County Board Chair

Buffalo County Resolution



Drafted By:
J. Lindstrom
Presented Month/Year:
February 2011
Involved Committees:
Land Conservation
Finance

County Department:
Land Conservation
Fiscal Impact: YES / NO
CA Approved: YES / NO

RESOLUTION # 11-03-05

A RESOLUTION TO Approve the Buffalo County Land and Water Resource Management Plan for Years 2012 – 2022.

WHEREAS, in 1997 Wisconsin ACT 27 amended Chapter 92.10 of the Wisconsin Statutes creating a county Land and Water Resource Management Plan Program; and

WHEREAS, in 2002 the State of Wisconsin adopted Administrative Rule Natural Resources 151 (NR 151) which set new rules and then revised the rule beginning in 2011, setting performance standards and prohibitions to prevent runoff and protect water quality; and

WHEREAS, the State of Wisconsin adopted Administrative Rule in Agriculture, Trade and Consumer Protection 50 (ATCP 50) that identifies conservation practices that farmers must follow to meet the required performance standards; and

WHEREAS, the State of Wisconsin requires {ATCP 50.12(1)} that Buffalo County prepare, submit for state approval and adopt a Land and Water Resource Management Plan to address local resource issues and identify how and when the new state agriculture performance standards and prohibitions will be implemented in Buffalo County; and

WHEREAS, state funding for cost sharing and staff funding depend on the County maintaining a Land and Water Resource Management Plan approved by the State Land and Water Conservation Board; and

WHEREAS, Buffalo County through their Land Conservation Department, has assembled the 2012-2022 Land and Water Resource Management Plan and a public hearing was held on the proposed Buffalo County Land and Water Resource Management Plan on February 22, 2011 and the plan was available to review in the Land Conservation Department prior to the public hearing; and

WHEREAS, the State of Wisconsin Land and Water Conservation Board is scheduled to review the Buffalo County 2012-2022 Land and Water Resource Management Plan for approval at the State of Wisconsin Land and Water Conservation Board Meeting on April 5, 2011.

NOW, THEREFORE BE IT RESOLVED, that the Buffalo County Land Conservation Committee hereby approve the 2012 – 2022 Buffalo County Land and Water Resource Management Plan this 22nd day of February 2011; and

BE IT FURTHER RESOLVED, that the Buffalo County Board of Supervisors approve the 2012 – 2022 Buffalo County Land and Water Resource Management Plan in anticipation of approval by the State of Wisconsin Land and Water Conservation Board.

Animal Unit Calculation Worksheet

** This worksheet is for informational purposes only. **

- Use this worksheet to determine how many animal units would be present on your operation under the revised method for calculating animal units. A Wisconsin Pollutant Discharge Elimination System (WPDES) permit is required for all livestock/poultry operations that will contain 1,000 or more animal units.

Complete the following four steps:

1. Enter the current number of head of each animal type on your operation to the left of the equal sign (=) in both Column A and Column B. Use the highest number of animals on-site at any time during the past year, and include all animals at adjacent locations or under common management. Multiply this number by the Equivalency Factor to calculate the equivalent number of animal units for each animal type.
2. Add all rows with equivalent animal units in Column A together and enter this total at the bottom of Column A. For Column B, enter the equivalent animal unit number from the row with the highest animal unit number, at the bottom of Column B. If either of the numbers at the bottom of Column A or B is equal to 1,000 or more animal units, the operation would need to apply for a WPDES permit.

ANIMAL TYPE		A. NUMBER OF MIXED ANIMAL UNITS (CURRENT NR 243 EQUIVALENCIES)			B. NUMBER OF NON-MIXED ANIMAL UNITS (FEDERAL EQUIVALENCIES)		
		Equ. Fac.	Number of animals	Equivalent Animal Units	Equ. Fac.	Number of animals	Equivalent Animal Units
<i>Example- Broilers (non-liquid manure):</i>		.005 x	150,000	= 750 AU	.008 x	150,000	= 1200 AU
DAIRY/BEEF CALVES (under 400 lbs.)		0.2 x	=	=	<i>(Note: Federal numbers in this column comply with 40 CFR s. 122.23.)</i>		
DAIRY CATTLE	Milking and Dry Cows	1.4 x	=	=	1.43 x	=	
	Heifers (800 lbs. to 1200 lbs.)	1.1 x	=	=	1.0 x	=	
	Heifers (400 lbs. to 800 lbs.)	0.6 x	=	=	(categories combined: Heifers (400-1200 lbs))		
BEEF	Steers or Cows (400 lbs. to market)	1.0 x	=	=	1.0 x	=	
	Bulls (each)	1.4 x	=	=	(categories combined: cattle (400-1200 lbs))		
VEAL CALVES		0.5 x	=	=	1.0 x	=	
SWINE	Pigs (55 lbs. to market)	0.4 x	=	=	0.4 x	=	
	Sows (each)	0.4 x	=	=	(categories combined: swine (55 lbs. to market))		
	Boars (each)	0.5 x	=	=			
	Pigs (up to 55 lbs.)	0.1 x	=	=	0.1 x	=	
CHICKENS	Layers (each)-non-liquid system	0.01 x	=	=	0.0123 x	=	
	Broilers/Pullets (each)-non-liquid system	0.005 x	=	=	0.008 x	=	
	Layers or Broilers-liquid system	0.033 x	=	=	0.0333 x	=	
DUCKS	Ducks (each)-liquid system	0.2 x	=	=	0.2 x	=	
	Ducks (each)-non-liquid system	0.01 x	=	=	0.0333 x	=	
TURKEYS (each)		0.018 x	=	=	0.018 x	=	
SHEEP (each)		0.1 x	=	=	0.1 x	=	
HORSES (each)		2.0 x	=	=	2.0 x	=	
TOTAL ANIMAL UNITS:		TOTAL MIXED AU = (add all rows above)			TOTAL NON-MIXED AU = (enter the single highest number from any row above; do NOT add the totals)		

Manure Management Emergency Response Plan

Landowner:		Phone No.:	
Address:			

If a manure spill occurs:

1. FIRST check the scene, is anyone hurt? If yes, call 9-1-1 for emergency medical assistance.

2. If the spill is on a road way, call 9-1-1.

3. Contain the spill if possible.

4. **Call:** (list names and phone numbers of farm members that should be contacted in the event of a spill)

a.	
b.	
c.	

5. If no answer for any of the above call:

a. **Wisconsin DNR Spill Reporting Hotline – 1-800-943-000**

6. If no answer at the DNR Spill Reporting Hotline call:

a. **Buffalo County Land Conservation – 608-685-6260 (hours are Monday through Friday 8:00 a.m. to 4:30 p.m.)**

7. As a last resort call:

a. **9-1-1 and they will contact the right people**

An accidental spill is not illegal. Failure to report it is.

When you report a spill have the following information available:

- Any public safety danger as a result of the spill
- Name, address and location of the manure owner
- Location of the spill.
- The physical state and quantity of the manure spilled
- The potential impacts to human health and the environment
- Actions you took to control the impact of the spill
- Document incident as soon as possible

Other Useful Contact: (such as excavation contractors, neighbors and phone numbers)

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Manure Spill Cleanup Options

Leaks and Spills from Manure Storage Facilities:

- **Contain the spill immediately through the use of basins and berms.**
- **Divert the manure from critical sites including: wells, channels, ditches, waterways, streams, rivers, structure inlets, tile inlets, broken tile lines, sinkholes and bedrock outcroppings**
- **Repair storage facility immediately.**
- **If conditions warrant, remove manure to safe levels.**
- **Contact Buffalo County Land Conservation Department (608-685-6260) or Buffalo County NRCS (608-685-4454) to advise on making critical repairs**

Manure Run-off from Fields:

- **Stop manure application immediately.**
- **Contain run-off through the use of basins and berms.**
- **Divert the manure from critical sites including: wells, channels, ditches, waterways, streams, rivers, structure inlets, tile inlets, broken tile lines, sinkholes and bedrock outcroppings.**
- **Incorporate applied manure.**
- **Plug tile lines if manure has entered them.**
- **Evaluate and eliminate the situation that caused the run-off.**

Manure Spill Response Kit

- **Straw bales**
- **Plywood (cut to cover culvert inlet)**
- **Bucket with bottom cut off (tile inlet block) or short piece of culvert**
- **Shovels**
- **Map showing where tile inlets (and outlets), culverts, streams and concentrated flow channels**

management areas (WQMA)?

3. Does the landowner grow agricultural crops? Y _____ N _____
4. Does the landowner raise, feed or house livestock? Y _____ N _____
5. If you answered yes to 3 or 4 you need to answer this question –Does the landowner follow a nutrient management plan when applying or contracting to apply manure to limit entry of nutrients into waters of the state? Y _____ N _____

Cropping season for last nutrient management plan

The following questions apply only to those landowners who raise, feed or house livestock.

1. Does the livestock operation have an unconfined manure piles in a water quality management area (WQMA)? Y _____ N _____
2. Does the livestock operation have any direct runoff from a feedlot or stored manure into waters of the state? Y _____ N _____
3. Does the livestock operation allow unlimited access by livestock to waters of the state in a location where high concentrations of animals prevent the maintenance of adequate sod or self-sustaining vegetative cover? Y _____ N _____

The following questions apply only to those landowners with Manure Storage Facilities.

1. Has a new manure storage facility been constructed? Y _____ N _____
If yes, does the facility meet NRCS Standards? Y _____ N _____
2. Has an existing facility been substantially altered? Y _____ N _____
If yes, does the altered facility meet NRCS Standards? Y _____ N _____
3. Has an operation ceased where a manure storage facility is located? Y _____ N _____
If yes, has the manure storage facility been abandoned according To NRCS Standards? Y _____ N _____
4. Does the livestock operation have any overflow of manure storage facilities? Y _____ N _____

_____ (landowner signature) – Date _____

_____ Phone #- _____

Landowner Address, City, State & Zip

WQMA

A water quality management area (WQMA) means the area within 1,000 feet from the ordinary high water mark of navigable waters that consist of a lake, pond or flowage; the area within 300 feet from the ordinary high water mark of navigable waters that consist of a river or stream; and a site that is susceptible to groundwater contamination, or that has the potential to be a direct conduit for contamination to reach groundwater.

Susceptible to Groundwater Contamination

A site that is susceptible to groundwater contamination means any of the following:

- a. An area within 250 feet of a private well (where facility is upslope of well)
- b. An area within 1,000 feet of a municipal well.
- c. An area within 300 feet upslope or 100 feet downslope of karst features. {A karst feature may include calves, enlarged fractures, mine features, exposed bedrock surfaces, sinkholes, springs, seeps or swallets}.
- d. A channel with a cross-sectional area equal to or greater than 3 square feet that flows to a karst feature.
- e. An area where the soil depth to groundwater or bedrock is less than 2 feet.
- f. An area where the soil above groundwater or bedrock does not exhibit one of the following
 1. At least a 2-foot soil layer with 40% fines or greater.
 2. At least a 3-foot soil layer with 20% fines or greater.
 3. At least a 5-foot soil layer with 10% fines or greater.

Nutrient Management Plan Requirements

1. For landowner who grow agricultural crops, starting in 2005 (for high priority areas such as impaired or exceptional waters) and 2008 (for all others) follow a nutrient management plan designed to limit entry of nutrients into waters of the state.
2. For landowners who raise, feed or house livestock, starting in 2005 (for high priority areas) and 2008 **(for all others) follow a nutrient management plan when applying or contracting to apply manure to entry limit entry of nutrients into waters of the state.**

Waters of the State

Waters of the state means those portions of Lake Michigan and Lake Superior within the boundaries of Wisconsin, all lakes, bays, rivers, streams, springs, ponds, wells, impounding reservoirs, marshes, water courses, drainage systems and other surface water or groundwater, natural or artificial, public or private within the state or under its jurisdiction, except those waters which are entirely confined and retained completely upon the property of a person.

Unconfined Manure Pile

Unconfined manure pile means a quantity of manure that is at least 175 cu. ft. in volume and which covers the ground surface to a depth of at least 2 inches and is confined within a manure storage facility or covered or contained in a manner that prevents storm water access and direct runoff to surface water or leaching of pollutants to groundwater.

Direct Runoff

Direct runoff means a discharge of significant amount of pollutants to waters of the state resulting from any of the following practices:

- a. Runoff from a manure storage facility
- b. Runoff from an animal lot that can be predicted to reach surface waters of the state through a defined or chanelized path or man-made conveyance
- c. Discharge of leachate from a manure pile
- d. Seepage from a manure storage facility
- e. Construction of a manure storage facility in permeable soils or over fractured bedrock without a liner designed in accordance with NRCS standards

Cost-Share Practice/Funding Source Table

Practice or Activity	ATCP 50 Reference	Funding Source	Units of Measurement
Land taken out of agricultural production (list on cost-share contract the practice to be installed or the eligible existing practice)	50.08(3)	Bonding	Acres
Riparian land taken out of agricultural production (list on cost-share contract the practice to be installed or the eligible existing practice)	50.08(4), 50.42(1)	Bonding	Acres
Manure storage systems	50.62	Bonding	Number installed (#)
Manure storage closure	50.63	Bonding	#
Barnyard runoff control systems (specify components)	50.64	Bonding	#
Access road or cattle crossing	50.65	Bonding	Linear Ft.
Animal trails and walkways	50.66	Bonding	Linear Ft.
Contour farming	50.67	GPR	Acres
Cover and green manure crop	50.68	GPR	Acres
Critical area stabilization	50.69	Bonding	#
Diversions	50.70	Bonding	Linear Ft.
Field windbreaks	50.71	Bonding	Linear Ft.
Filter strips	50.72	Bonding	Acres
Grade stabilization structures	50.73	Bonding	#
Heavy use area protection	50.74	Bonding	Acres
Livestock fencing	50.75	Bonding	Linear Ft.
Livestock watering facility	50.76	Bonding	#
Milking center waste control system	50.77	Bonding	#
Nutrient management	50.78	GPR	Acres
Pesticide management	50.79	GPR	#
Prescribed grazing	50.80		
a. Management plan		GPR	#
b. Fencing (not permanent)		GPR	Linear Ft.
c. Fencing (permanent)		Bonding	Linear Ft.
d. Establish permanent pasture (seeding)		Bonding	Acres
Relocating or abandoning animal feeding operations	50.81	Bonding	#
Residue management	50.82	GPR	Acres
Riparian buffers	50.83		
a. Installation (including land out of production)		Bonding	Acres
b. Maintenance		GPR	Acres
Roofs	50.84	Bonding	#
Roof runoff systems	50.85	Bonding	#
Sediment basins	50.86	Bonding	#
Sinkhole treatment	50.87	Bonding	#
Streambank and shoreline protection	50.88	Bonding	Linear Ft.
Strip-cropping	50.89	GPR	Acres
Subsurface drains	50.90	Bonding	#

Terrace systems	50.91	Bonding	Linear Ft.
Underground outlet	50.92	Bonding	#
Waste transfer systems	50.93	Bonding	#
Wastewater treatment strips	50.94	Bonding	Linear Ft.
Water and sediment control basins	50.95	Bonding	#
Waterway systems	50.96	Bonding	Acres
Well decommissioning	50.97	Bonding	#
Wetland restoration	50.98	Bonding	Acres
Engineering Services provided in connection with a completed cost-share practice for which bond revenue may be used (also refer to 50.40(7)).	50.34(4)	Bonding	
Other cost-effective practices with DATCP's written approval			

Farmstead/Cropping Assessment Checklist

Date of Inventory: _____

Landowner Name & Address: _____

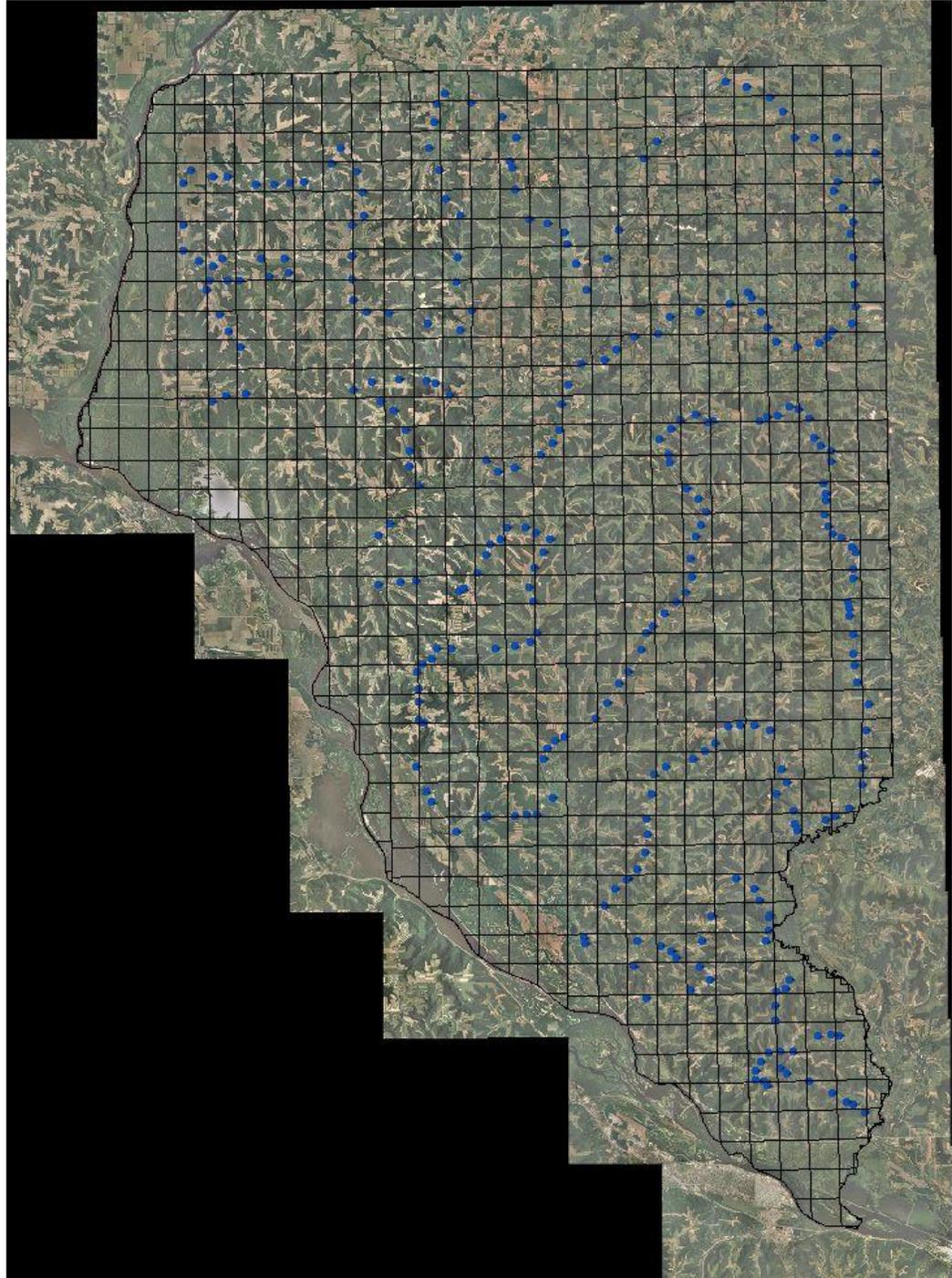
Inventory Completed by: _____

Preliminary Site Map	Yes	No	Comments
Are aerial photographs, maps or sketches of the livestock production site available, showing the location of the buildings, manure storage, wells, fuel tanks, feed storage, pesticide loading-mixing pad, clean water practices, surface water drainage features around the facility and adjoining surface waters?			
Are aerial photographs available to show the conservation plan field locations?			
Agricultural Performance Standards and Prohibitions			
Does the landowner grow agricultural crops?			
Does cropland erosion meet tolerable rate "T" in accordance with the conservation farm plan and is landowner farming according to his conservation farm plan?			When was the conservation plan last updated?
Does the landowner raise, feed or house livestock?			
Does the landowner have a nutrient/pest management plan available for review?			When was the nutrient/pest management plan written?
Does the livestock operation have any unconfined manure piles			

in a Water Quality Management Area?			
Does the livestock operation have any direct runoff from a feedlot or stored manure into waters of the state?			
Does the livestock operation allow unlimited access by livestock to waters of the state in a location where high concentration of animals prevent the maintenance of adequate sod or self-sustaining vegetative cover?			
Has run-off been diverted away from contacting feedlot, manure storage areas, and barnyard areas within water quality management areas?			
Are there any manure storage facilities at the site?; and does the facility meet NRCS standards?			When was the facility constructed?
Has an existing storage facility been substantially altered?; and does the altered facility meet NRCS standards?			When was the facility constructed?
Has an operation ceased where a manure storage facility is located?; and has the manure storage facility been abandoned according to NRCS standards?			When was the storage facility last used?
Does the livestock operation have any overflow of manure storage facilities?			
New in 2011			
Tillage setback performance standard. Is tillage operation within 5 feet of the top of the channel of surface waters?			
Phosphorus Index performance standard. Does croplands, pastures and winter grazing areas have an average phosphorus index of 6 or less over the accounting period?; and not greater than 12 in any individual year within the accounting period?			
Additional Items – For environmental concerns only and not determination of compliance.			
Is the livestock operation currently under , or in the process of acquiring a WPDES Permit?			
Has the number of livestock on the site been provided?, including a calculation of the Animal Units (AU) by livestock type and size class available?			What are the total AU? By livestock number and size.
Has stormwater management form the site been addressed? (Document sediment and runoff sources and proximity to surface waters).			
Are veterinary medical wastes properly stored and disposed of?			
Are plastic covers form feed storage areas properly disposed of?			

Cropping Inventory.			
Are grassed waterways in place and functioning on your cropland?			
Do you feel there are any cropped fields that may need waterways?			
Do you have any problems with rill or gully erosion?			
Are you interested in implementing contour strips or contour buffers?			Contour strips _____ Contour Buffers _____
What primary tillage method are you using? (conventional <30% residue _____, Minimum tillage > 30% residue _____, No-till _____)			
If you chisel or moldboard plow, when is it done? Spring _____ Fall _____			
What type of chisel plow do you use? Straight shank _____ Twisted shank _____			
What type of secondary tillage do you do? Disk _____ field cultivate _____ other _____			
Do you row cultivate?			

Transect Route in Buffalo County



Buffalo County Ordinance



Drafted By:
Land Conservation Committee
Presented Month/Year:
August 2007

County Department:
Land Conservation
Fiscal Impact: YES / NO

Involved Committees:
Land Conservation

CA Approved: YES / NO

ORDINANCE # 07-08-01

BUFFALO COUNTY MANURE STORAGE ORDINANCE

SECTIONS:

1. Introduction
2. Definitions
3. Activities Subject to Regulation
4. Standards
5. Application for and Issuance of Permits
6. Administration
7. Violations
8. Appeals

SECTION 1. INTRODUCTION

1.01 Authority & Name. This ordinance is adopted under authority granted by sections §59.02, 59.03, 59.69, 59.70 and 92.15, 92.16, Wis. Stats.

1.02 Title. This ordinance shall be known as, referred to, and may be cited as the Buffalo County Manure Storage Ordinance and is hereby referred to as the “ordinance”.

1.03 Findings and Declaration of Policy. The Buffalo County Board of Supervisors finds that storage of animal manure in storage facilities not meeting technical design and construction standards is a threat to cause pollution of the surface and ground waters of Buffalo County, and may result in actual or potential harm to the health of county residents and transients; to livestock, aquatic life and other animals and plants; and to the property tax base of Buffalo County.

The County Board of Supervisors also finds that improper management of manure storage facilities, and utilization, including land application, of stored manure, may cause pollution of the ground and surface waters of Buffalo County.

The Buffalo County Board of Supervisors further finds that the technical standards developed by the United States Department of Agriculture-Natural Resource Conservation Service (U.S.D.A., N.R.C.S.) as adopted by the Land Conservation Committee, provide effective, practical, and environmentally safe methods of storing and utilizing animal waste.

1.04 Purpose. The purpose of this ordinance is to regulate the location, design, construction, installation, alteration, closure and use of manure storage facilities, and the land application of wastes from these facilities in order to prevent water pollution and thereby protect the health of Buffalo County residents and transients; prevent the spread of disease; and promote the prosperity and general welfare of the citizens of Buffalo County. It is also intended to provide for the administration and enforcement of the ordinance and to provide penalties for its violation.

1.05 Interpretation. In their interpretation and application the provisions of this ordinance shall be held to be minimum requirements and shall be liberally construed in favor of Buffalo County, and shall not be deemed a limitation or repeal of any other power granted by the Wisconsin Statutes.

1.06 Severability Clause. If any section, provision, or portion of this ordinance is ruled invalid by a court, the remainder of the ordinance shall not for that reason be rendered ineffective.

1.07 Applicability. This ordinance applies to the unincorporated areas of Buffalo County and to all manure storage facilities constructed therein.

1.08 Effective Date. This ordinance shall become effective upon its adoption by the Buffalo County Board of Supervisors, the first day of the first month following publication.

SECTION 2. DEFINITIONS

A. Abandoned Manure Storage Facility means any manure storage facility, not used for its intended purpose for a period of 24 consecutive months, and will by all available evidence, not again be used to store manure by an active livestock operation.

B. Manure means a material that consists primarily of excreta from livestock, poultry and other materials, such as bedding, rain or other water, soil, hair, feathers, and other debris normally included in manure handling operations.

C. Manure Storage Facility means any earthen, concrete, wooden, steel or otherwise fabricated structure intended to temporarily store an accumulation of manure. For the purpose of this ordinance, any facility constructed or excavated for the purpose of storing manure shall be considered a manure storage facility. An uncontained deposit of animal waste in place for less than 100 consecutive days located on an earthen, concrete, or other surface, necessary to facilitate daily or periodic land spreading is considered a manure stack. Manure stacks do not require a permit, but should have their location approved by LCD staff or their designee prior to stacking. All manure storage facilities constructed after the effective date of this ordinance must have a permit.

D. Applicant means any person who applies for a permit under this ordinance.

E. Bedrock means the rocks that underlay soil material or at the earth's surface. Bedrock is encountered when the weathered-in-place consolidated material, larger than two millimeters (2mm) in size, is greater than fifty percent (50%) by size.

F. Groundwater Level means the higher of either the elevation to which the soil is saturated as observed as a free water surface in and unlined hole, or the elevation to which the soil has been seasonally or periodically saturated as indicated by soil color patterns throughout the soil profile. For the purpose of these rules, high groundwater color patterns should be established by the presence of low chroma- mottles.

G. Land Conservation Committee (LCC) means the committee created by a county board under Wisconsin Statutes.

H. Land Conservation Department (LCD) means the county staff assigned the responsibility of enforcing, and providing technical assistance for this ordinance.

I. Nutrient Management Plan means a written plan detailing the amount, form, placement, and timing of application of plant nutrients, including manure. The plan must meet Natural Resource Conservation Service Standard 590 and must be written or approved by a person certified to do nutrient management planning.

J. Permit means the signed, written statement issued by the Buffalo County Land Conservation Department under this ordinance authorizing the applicant to construct, install, reconstruct, enlarge, substantially alter or close a manure storage facility and to use or dispose of manure from the facility.

K. Permittee means any person to whom a permit is issued under this ordinance.

L. Person means an individual, corporation, partnership, joint venture, agency, unincorporated association, municipal corporation, county, or state agency within Wisconsin, the federal government, or any combination thereof.

M. Technical Guide means the U.S.D.A Natural Resource Conservation Service Field Office Technical Guide as adopted by the Buffalo County Land Conservation Committee and its Department

N. Unconfined Manure Pile means a quantity of manure that is at least 175 cubic feet in volume (approx. size of pile – 50 ft. x 20 ft. x 2” in depth) and is not confined within a manure storage facility, livestock housing facility, or barnyard runoff control facility and contained in a manner that prevents storm water access and direct runoff to surface water or leaching of pollutants to groundwater.

O. Water Pollution means contaminating or rendering unclean or impure the ground or surface waters of the state, or making the same injurious to public health harmful for commercial or recreational use, or deleterious to fish, bird, animal or plant life.

P. Substantially Altered means a change initiated by an owner or operator that results in a relocation of a structure or facility or significant changes to the size, depth or configuration of a structure or facility including:

- a) Replacement of a liner in a manure storage structure.
- b) An increase in a volumetric capacity or area of a structure or facility by greater than 20%.
- c) A change in a structure or facility related to a change in livestock management from one species of livestock to another such as cattle to poultry.

Q. Water Quality Management Area means any of the following:

- a) The area within 1,000 feet of the ordinary high water mark of a navigable lake, pond, or flowage other than a glacial pothole lake.
- b) The area within 1,000 feet of the high water mark of a glacial pothole
- c) The area within 300 feet of the ordinary high water mark of a navigable river or stream.
- d) An area that is susceptible to groundwater contamination, or has the potential to be a direct conduit for contamination to reach groundwater.

R. Susceptible to Groundwater Contamination means any one of the following:

- a) An area within 250 feet of a private well.
- b) An area within 1,000 feet of a municipal well.
- c) An area within 300 feet up-slope or 100 feet down-slope of karst features.
- d) A channel with a cross-sectional area equal to or greater than 3 square feet that flows to a karst feature.

- e) An area where the soil depth to groundwater or bedrock is less than 2 feet.
- f) An area where the soil does not exhibit one of the following characteristics:
 - 1. At least a 2 foot soil layer with 40 percent fines or greater above groundwater and bedrock.
 - 2. At least a 3 foot soil layer with 20 percent fines or greater above groundwater and bedrock.
 - 3. At least a 5 foot soil layer with 10 percent fines or greater above groundwater and bedrock. {See NR 151.002(32) for definition of percent fine } {NR 151.05}

SECTION 3. ACTIVITIES SUBJECT TO REGULATION

3.01 General Requirement. Any person who designs, constructs, installs, reconstructs, enlarges, or substantially alters a manure storage facility; or who employs another person to do the same, on land subject to this ordinance, shall be subject to the provisions of this ordinance. The requirements of this ordinance are in addition to any other permits or requirements that may apply to construction or abandonment of manure storage facilities.

3.02 Closure Requirement. Closure of a manure storage facility shall occur when an operation where the facility is located ceases operation or manure has not been added or removed from the facility for a period of 24 months. Manure facilities shall be closed in a manner that will prevent future contamination of groundwater and surface water. The owner or operator may retain the facility for a longer period of time by demonstrating to the Land Conservation Department that all of the following conditions are met:

- a) The facility is designed, constructed and maintained in accordance to sub. (2) NR 151.05.
- b) The facility is designed to store manure for a period of time longer than 24 months.
- c) Retention of this facility is warranted based on anticipated future use.

3.03 Failing and Leaking Existing Systems. Manure storage facilities in existence as of October 1, 2002, that pose an imminent threat to public health or fish and aquatic life or are causing a violation of groundwater standards shall be upgraded, replaced or closed in accordance with this section.

3.04 Compliance with Permit Requirements. A person is in compliance with this ordinance if he or she follows the procedures of this ordinance, receives a permit from the Land Conservation Department before beginning activities subject to regulation under this ordinance, and complies with the requirements of the permit.

3.05 Manure Management Prohibitions.

- 1) A livestock operation shall comply with the following:
 - a) A livestock operation shall have no overflow of manure storage facilities
 - b) A livestock operation shall have no unconfined manure pile in a water quality management area.
 - c) A livestock operation shall have no direct runoff from a feedlot or stored manure into the waters of the state.
 - d) A livestock operation may not allow unlimited access by livestock to waters of the state in a location where high concentrations of animals prevent the maintenance of adequate sod or self sustaining vegetative cover. This prohibition does not apply to properly designed, installed and maintained livestock or farm equipment crossings.
- 2) Cost-sharing requirement pursuant to Section 281.16 (3) of the Wisconsin Statutes, a livestock operation that is in existence prior to October 1, 2002, shall not be required to comply with the manure management prohibitions unless cost-sharing is made available.

3) Non-compliance with the manure management prohibitions shall result in enforcement actions in accordance with NR 151.095, WI Admin. Code.

SECTION 4. STANDARDS

Compliance with this ordinance shall be through standards, specifications, and policies adopted by the Buffalo County Land Conservation Committee. Standards and specifications are minimums. The following components of the USDA Natural Resource Conservation Service's Technical Guide will be used when a storage facility is to be designed, constructed, installed, moved, reconstructed, enlarged, removed, abandoned, or substantially altered:

4.01 Standards for Manure Storage Facilities. The standards for design and construction of manure storage facilities are standards 313 (Waste Storage Facility) and 634 (Manure Transfer) in the Technical Guide.

4.02 Standards for Nutrient Management. The standard for management of manure storage facilities and utilization of manure is standard 590 (Nutrient Management) in the Technical Guide.

4.03 Standards to Close a Manure Storage Facility. The standard to close a manure storage facility that is no longer used for their intended purpose, in an environmentally safe manner, is standard 360 (Closure of Waste Impoundments) in the Technical Guide.

4.04 Subsequent Modification of Standards. The standards of the Technical Guide are adopted and by reference made a part of this ordinance as if fully set forth. Any future amendment, revision or modification of the Standards incorporated herein are made a part of this ordinance upon Land Conservation Committee approval. Standards adopted by the Land Conservation Committee are available for review at the Land Conservation Department office.

SECTION 5. APPLICATION FOR AND ISSUANCE OF PERMITS

5.01 Permit Required. A permit from the Land Conservation Department is required for the following activities:

- a) Construction or substantial alteration of a manure storage facility.
- b) To close any facility that is no longer used for storage.

5.02 Exception to Permit Requirement. Emergency repairs such as repairing a broken pipe or equipment, leaking dikes, or the removal of obstructions from transfer pipes may be performed without a permit. If repairs will significantly alter the original design and construction of the facility, a report shall be made to the Department of Land Conservation within two (2) work days of the emergency for a determination by the Land Conservation Department on whether a permit will be required for any additional alteration or repair to the facility.

5.03 On Site Investigation Required. Each application for a permit under this section shall require an on site inspection prior to issuance and include a summary report on site conditions. The site inspection shall be conducted by the Land Conservation Department staff.

5.04 Fee. A non-refundable fee of \$50.00 will be required for the permit. A minimum of \$ 250.00 will be charged for a permit cost after any construction has commenced without a permit. No fee will be charged for permit closure.

5.05 Construction Plan. Each application for a permit under this section shall include a manure storage facility plan or design for construction.

The Manure Storage Facility Plan or Design - shall include the following:

1. A determination will be conducted to demonstrate that suitable land base is available for utilization of waste.
2. The number and kinds of animals for which storage is provided and the duration for which storage is to be provided.
3. A plan view of the facility and its location in relation to the waste transfer inlet, all buildings, roads, wells, lot lines, and other features within 300 feet of the proposed facility. The plan view shall be drawn to scale, with a scale no smaller than 1 inch = 100 feet, the North arrow, scale of drawing, legal description of the proposed facility, and location, description and elevation of temporary bench mark.
4. The structural details, including, but not limited to, dimensions, cross section showing elevations, concrete thickness, concrete joint design and placement, design loads, design computations, reinforcement schedules, construction and material specifications including but not limited to, applicable specifications for earthen fill, excavation, concrete, liner material, reinforcing steel, timber and pipes.
- 5.
6. Make and model of pre-qualified structure, if used. Concrete quantity not included in pre-qualified structure.
- 7.
8. Agitation access layout, grading plan to keep clean water from entering structure, seeding specifications, and tile and drainfill layout, if needed.
9. The location of any wells within 300 feet of the facility.
10. The location of any sinkholes within 1,000 feet of the manure storage facility.
11. The soil test pit locations and soil descriptions to a depth of at least five feet below the planned bottom of the facility.
12. The elevation of seasonally high groundwater level or bedrock, if encountered in the soil profile and the date of any such determinations.
13. Provisions for adequate drainage and control of runoff to prevent pollution of surface water and groundwater. If a navigable body of water lies within 500 feet of the facility, the location and distance to the body of water shall be shown. Any floodplains and/or wetlands shall be located also.
14. A time schedule for construction of the facility.
15. A description of the method to be used in transferring animal waste into and from the facility.
16. A description of the location and type of fences, warning signs and safety features needed to meet the technical standards.
17. Certification by a registered Professional Engineer (PE), Department of Agriculture Trade and Consumer Protection (DATCP), Land Conservation Department, or Natural Resource Conservation Service certified Agricultural Engineering Practitioner that the plans meet the requirements of the ordinance.
18. A written operation and maintenance, and safety plan for the facility.
19. A nutrient management plan meeting the NRCS 590 standard.

5.06 Nutrient Management Plan. As part of the application for construction permit, a landowner must develop an annual nutrient management plan that complies with ATCP 50.04.

The nutrient management plan shall include the following:

- a) Identification of every field on which the landowner mechanically applies nutrients.
- b) Be prepared by a nutrient management planner qualified under ATCP 50.48
- c) Rely on soil nutrient tests conducted at a laboratory certified under ATCP 50.50.
- d) Comply with the NRCS technical guide nutrient management standard 590
- e) Follow recommendations for nutrient applications in the University of Wisconsin Extension in a Soil Test Recommendation for Field, Vegetable and Fruit Crops, UWEX Publication A-2809 (1998), unless the nutrient management planner can show that circumstances justify more than the recommended application. This plan shall be submitted to the Land Conservation Department no later than March 15th of the year following installation of the manure storage facility and every year thereafter by March 15th, while the facility is in use.

5.07 Closure Plan. Each Application for a closure permit under this ordinance shall include a closure plan prepared in accordance with Technical Standard 360. Manure Storage Facilities shall be closed in a manner that will prevent future contamination of groundwater and surface waters.

The Closure Plan shall include the following:

- 1. A description of the type and size of the waste storage facility and an estimate of the amount of waste in the facility.
- 2. A description of where and how the waste and soil saturated with manure will be applied in accordance with Technical Standard 590.
- 3. A description of where the liner, if any, will be deposited of.
- 4. A description of how the transfer will be removed or permanently plugged
- 5. A description of how the evacuated area will be filled in and where the clean fill will come from
- 6. A plan view showing the final grade, the area to be reseeded, and how runoff will be diverted away from the site.
- 7. Certified by a registered Professional Engineer (PE), Department of Agricultural Trade and Consumer Protection (DATCP), Land Conservation Department, or Natural Resource Conservation Service certified Agricultural Engineering Practitioner that the plans meet the requirements of the ordinance.

5.08 Review of Application. The Land Conservation Department shall receive all permit applications. All permit applications shall be reviewed by the Land Conservation Department and the Land Conservation Committee prior to issuance of the permit. Permit applications must be received on forms provided by the Land Conservation Department. The Land Conservation Department or a designee shall determine if the proposed facility meets required standards set forth in "Standards" of this ordinance.

Within fifteen (15) working days after receiving the completed application and fee, the Land Conservation Department shall inform the applicant in writing whether the permit application is approved or disapproved.

If additional information is required, the Land Conservation Department shall so notify the permit applicant. The Land Conservation Department has fifteen (15) working days from the receipt of the additional information in which to approve or disapprove the application. If the applicant receives no response within fifteen (15) working days of application, the application will be considered denied.

No construction may commence without the final approval form being executed by the Land Conservation Department.

5.09 Permit Conditions. All permits issued under this ordinance shall be issued subject to the following conditions and requirements:

1. Animal waste storage facility design and construction management, and utilization activities shall be carried out in accordance with the manure facility plans and applicable standards specified in Standards and Application for and Issuance of Permits sections of this ordinance.
2. The permittee shall give five (5) working days notice to the Land Conservation Department before starting any construction activity authorized by the permit.
3. Approval in writing must be obtained from the Land Conservation Department prior to any modifications to the approved manure facility plan.
4. The permittee and, if applicable, the contractor shall certify in writing that the facility was installed as planned.
5. The Land Conservation Department staff may conduct on site inspections during and after construction.
6. Within 30 days of completion, the facility must be certified as meeting standards, including as-built plans and design changes. The certification must be made by a registered PE, or by a DATCP, Land Conservation Department or Natural Resource Conservation certified Engineering Practitioner. This certification must be made before the storage facility is put into service.

Activities authorized by permit must be completed within two (2) years from the date of issuance after which such permit shall be void. Extensions may be granted by the Land Conservation Department upon written request from the permittee.

5.10 Permit Revocation. The Land Conservation Department may revoke any permit issued under this ordinance if the holder of the permit has misrepresented any material in the permit application or animal waste facility plan, or if the holder of the permit violates any of the conditions of the permit.

SECTION 6. ADMINISTRATION

6.01 Delegation of Authority. Buffalo County hereby designates the Buffalo County Land Conservation Department to administer and enforce this ordinance.

6.02 Administrative Duties. In the administration of this ordinance, the Land Conservation Department shall:

1. Keep an accurate record of all permit applications, animal waste facility
2. Review permit applications and issue permits in accordance with the Application for and Issuance of Permits section of this ordinance.
3. Inspect animal waste facility construction to insure the facility is being constructed according to plan specifications.
4. Investigate complaints relating to compliance with the ordinance
5. Randomly determine individual compliance with the ordinance requirements at least once every four year.

6. Provide technical services to the extent resources are available
7. Perform other duties as specified in this ordinance.

6.03 Inspection Authority. Pursuant to §92.07(14), Wis. Stats, the Land Conservation Department is authorized to enter upon any lands affected by this ordinance to inspect the land prior to or after permit issuance to determine compliance with this ordinance. If permission cannot be received from the applicant or permittee to enter the land, then the Land Conservation Department shall enter under its legal authority.

6.04 Enforcement Authority. The Land Conservation Department is authorized to post an order stopping work upon land which has had a permit revoked or on land in violation of this ordinance. Notice is given by both posting upon the land where the violation occurs, one or more copies of a poster stating the violation, and by mailing a copy of the order by certified mail to the person whose activity is in violation of this ordinance. The order shall specify that the activity must cease immediately and be brought into compliance within five (5) working days.

Any permit revocation or order stopping work shall remain in effect unless retracted by the County Board of Adjustment, the LCC, the LCD, or by court of general jurisdiction; or until the activity is brought into compliance with the ordinance. The Land Conservation Department is authorized to refer any violation of this ordinance to the corporation counsel for commencement of further legal proceedings seeking penalties and other appropriate relief in enforcement of the ordinance.

SECTION 7. VIOLATIONS

7.01 Penalties. Any person who violates, neglects, or refuses to comply with or resists the enforcement of any of the provisions of this ordinance shall be subject to a forfeiture of up to \$200.00 plus costs of prosecution for each violation. An unlawful violation includes failure to comply with any activity or standard of this ordinance or with any permit requirement, condition or qualification. Each day that a violation exists shall be a separate offense.

7.02 Enforcement of Injunction. As a substitute for or as an addition to forfeiture actions, Buffalo County may seek enforcement of any part of this ordinance by court action seeking injunctions or restraining orders.

SECTION 8. APPEALS

8.01 Authority. The Buffalo County Board of Adjustment shall hear and decide appeals where it is alleged that there is an error in any order, requirement, decision, or determination by Land Conservation Department staff in administering this ordinance.

8.02 Procedure. Any Appeal shall be made by written request, mailed or delivered to the Buffalo County Land Conservation Department, 407 South Second Street, Alma, WI 54610. The request shall state the ground or grounds upon which it is contended that the decision should be modified or reversed. The committee shall, as soon as reasonable, but no later than its next regular meeting, review the determination under appeal.

8.03 Statutory Administrative Review and Certiorari. The decision of the Buffalo County Land Conservation Committee shall be subject to further administrative review by the Board of Adjustments if a written appeal seeking such review is filed within thirty (30) days after the decision of the committee. The decision of the Board of Adjustments Committee shall be subject to judicial review, if within thirty (30) days after the decision of the Board of Adjustment an action seeking the remedy available by certiorari is commenced, as authorized by Section 59.99 of the Wisconsin Statutes.

8.04 Who May Appeal. Appeals may be taken by any person having a substantial interest which is adversely affected by the order, requirement, decision, or determination for which review is sought.

Appendix B

Buffalo County Aerial Photo Map	pg. 91
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Waterbodies of the County	pg. 94
Pl-566 Structure Location	pg. 95
Sub-watershed Map	pg. 96
Soil Associations Map	pg. 97
CAFO Farm Location Map in Buffalo County	pg. 98

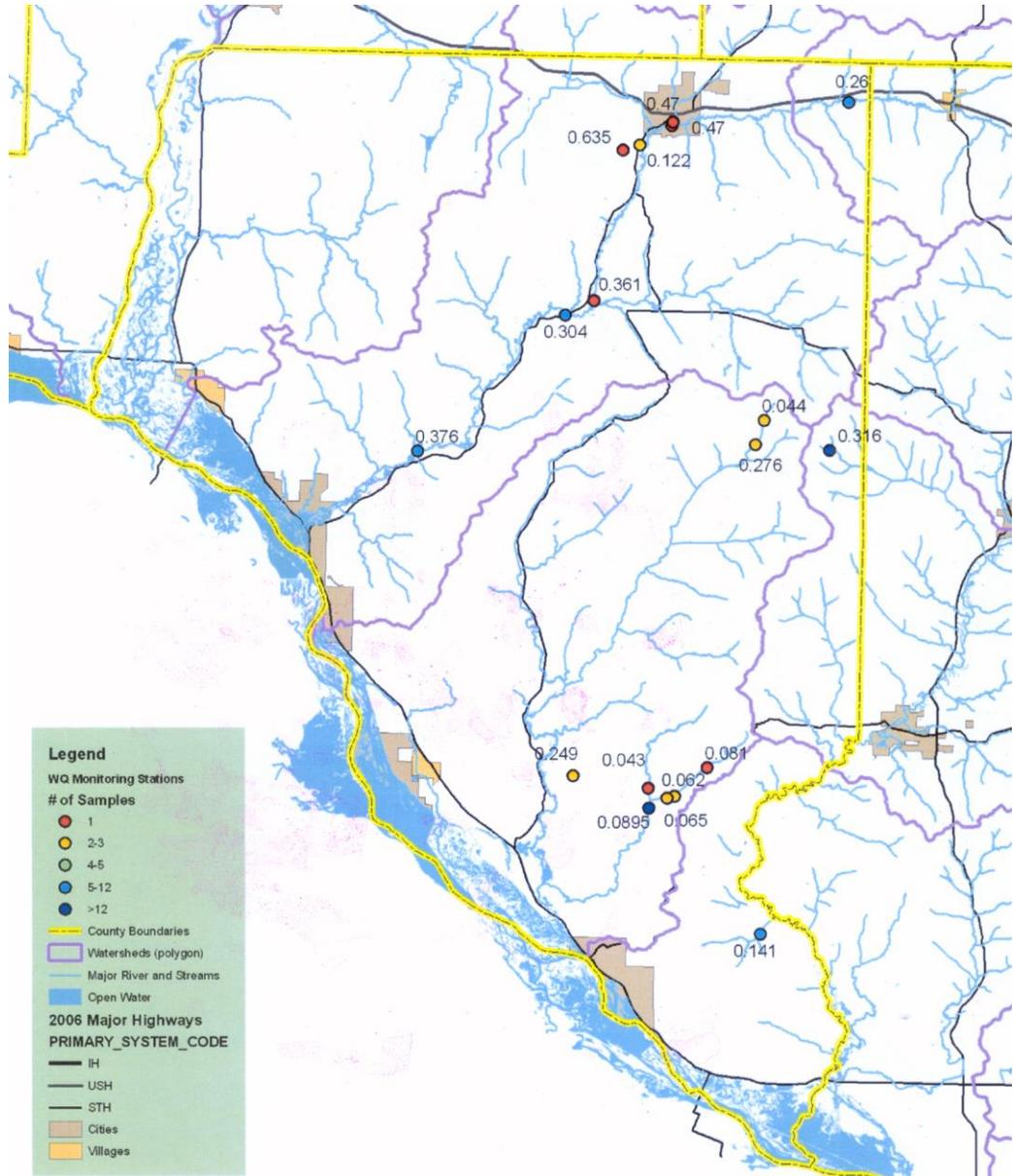
Aerial Photo Map of Buffalo County



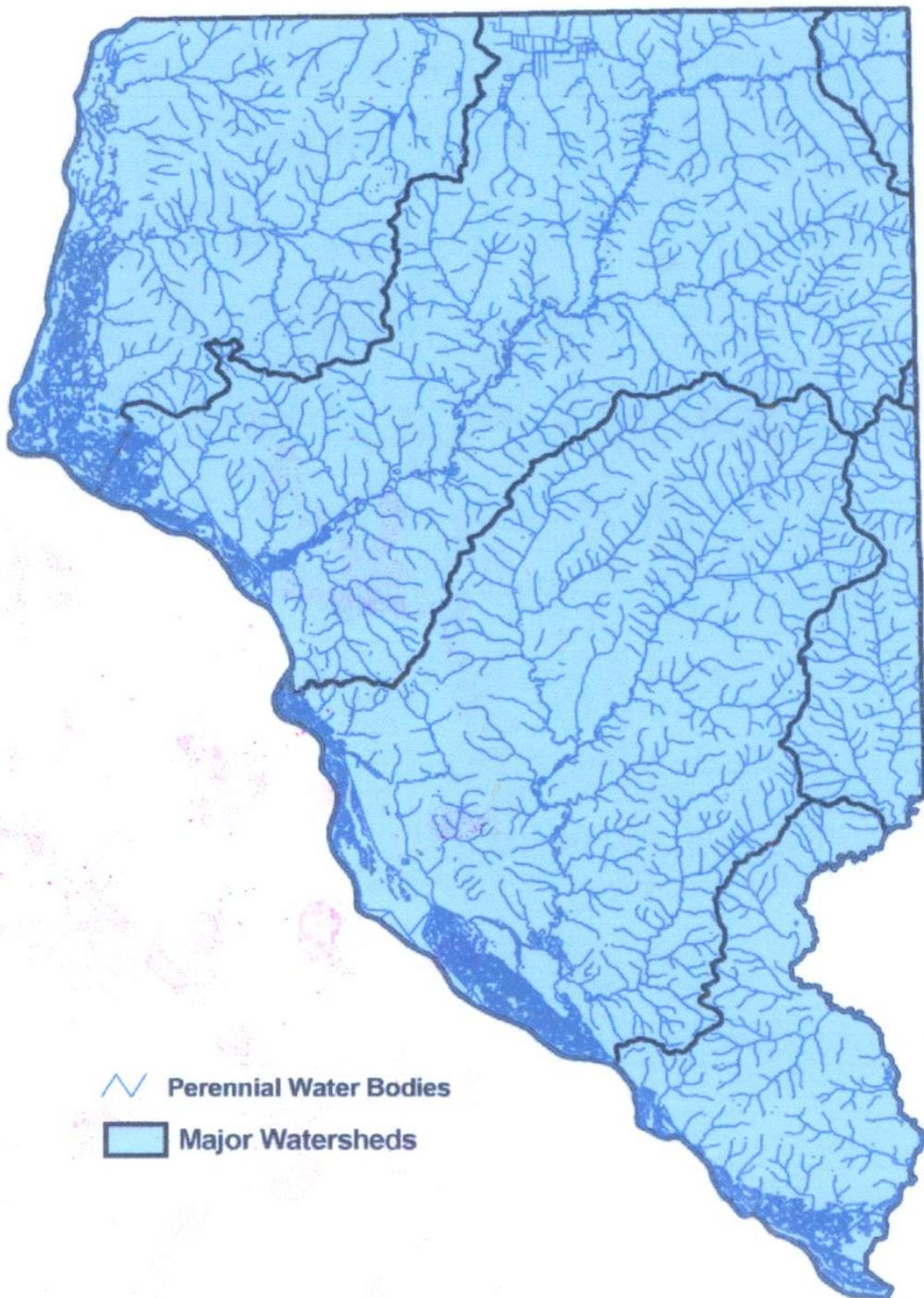
Townships of Buffalo County



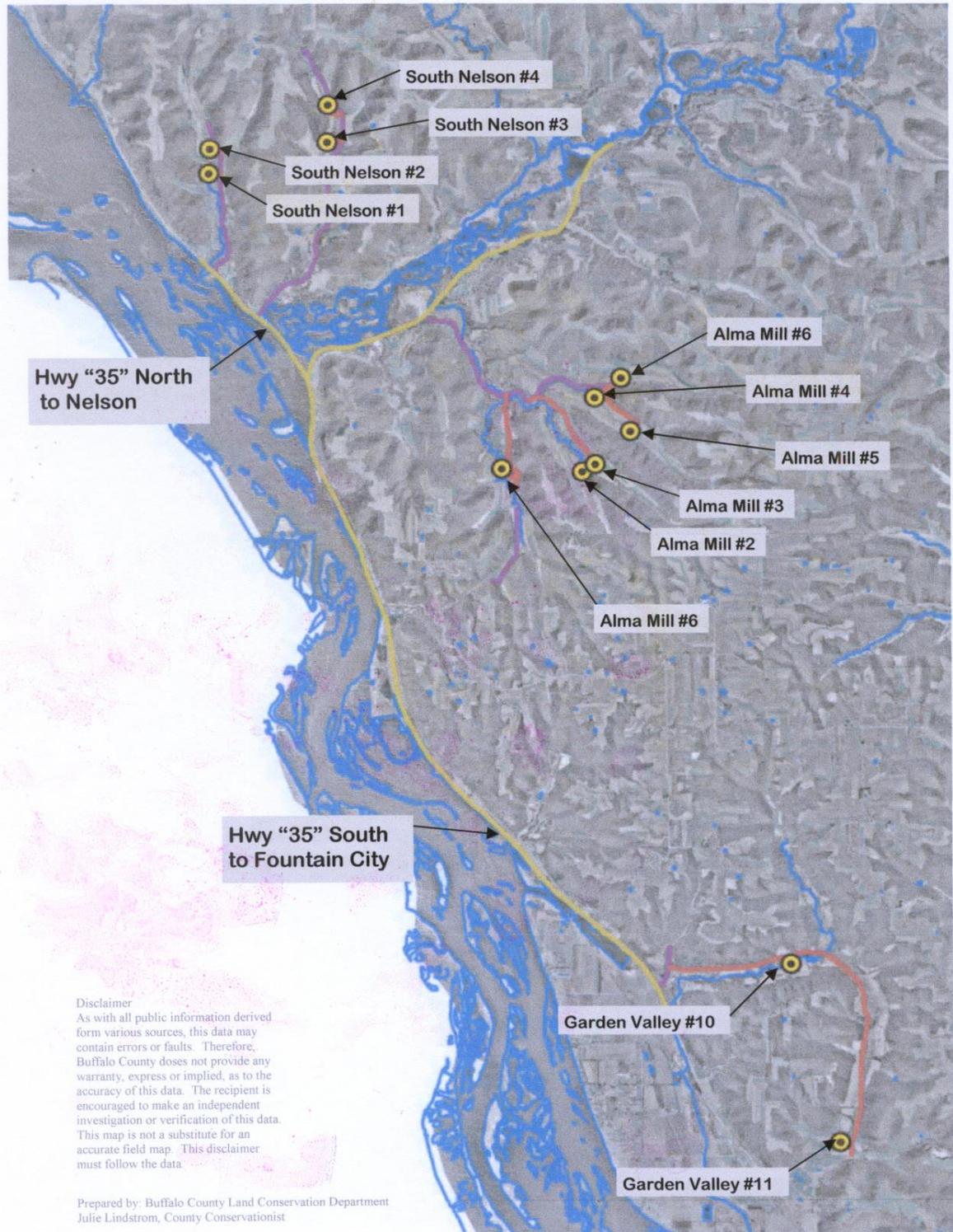
Median growing season total phosphorus data (mg/l) in Buffalo County (2001-present)



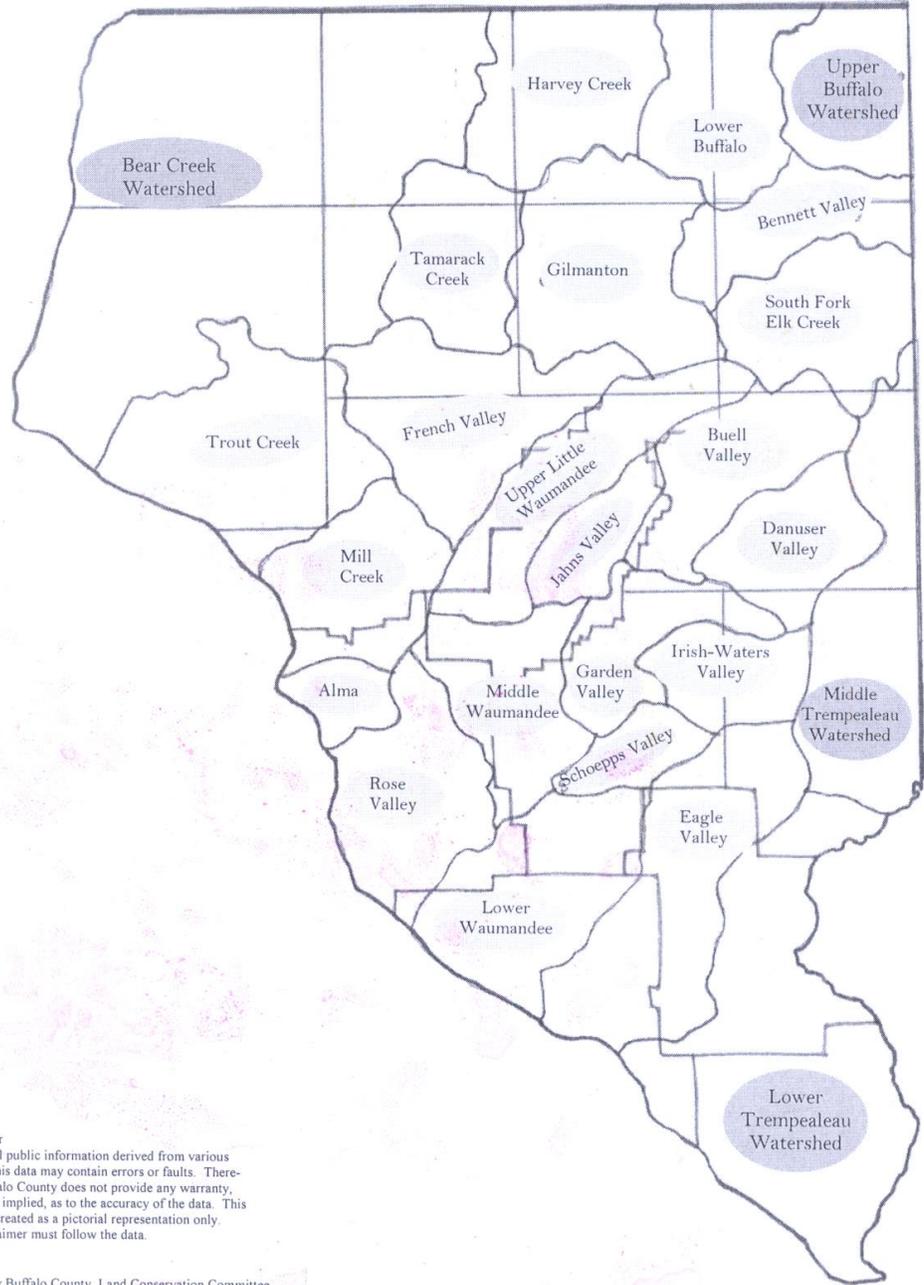
Waterbodies of Buffalo County



PL-566 Structure Locations in Buffalo County



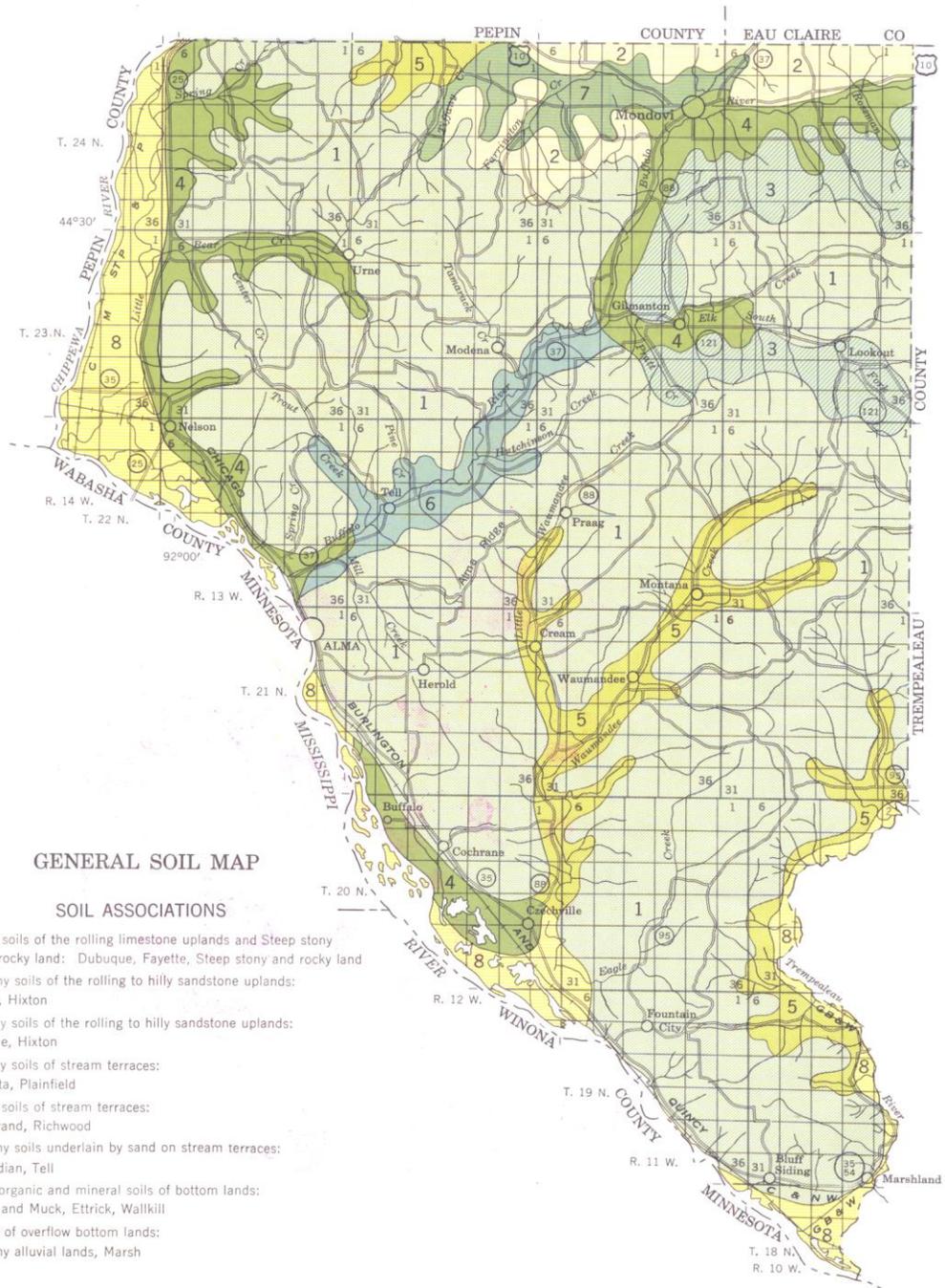
Sub-Watersheds of Buffalo County (in the Lower Buffalo and Waumandee Creek Watersheds)



Disclaimer
 As with all public information derived from various sources, this data may contain errors or faults. Therefore, Buffalo County does not provide any warranty, express or implied, as to the accuracy of the data. This map was created as a pictorial representation only. This disclaimer must follow the data.

Created by Buffalo County Land Conservation Committee
 Julie Lindstrom, County Conservationist

Soil Associations Map of Buffalo County



Concentrated Animal Feeding Operations

Farms with over 1,000 AU or approximately 700 dairy cows or any combination of #'s of livestock (see Animal Unit {AU} Calculation Worksheet on page 70).



References

- Buffalo County District (1958). *Alma-Mill Creek Watershed Work Plan*. Buffalo County, Wisconsin.
- Buffalo County District (1962). *Garden Valley (Rose Valley) Watershed Work Plan*. Buffalo County, Wisconsin.
- Buffalo County District (1960). *South Nelson Watershed – Work Plan for the Watershed Protection and Flood Prevention*. Buffalo County, Wisconsin.
- USDA-NRCS, Wisconsin Land and Water Conservation Association (2007, March). *Guide to Conservation Programs for Wisconsin Landowners*.
- USDA – National Agricultural Statistics Service: www.agcensus.usda.gov
- Wisconsin Department of Agricultural Trade and Consumer Protection: <http://datcp.wi.gov>
- Wisconsin DNR (miscellaneous): <http://dnr.wi.gov>
- Wisconsin DNR (2002). *The State of the Black-Buffalo-Trempealeau Basin*.
- Wisconsin DNR (2001). *The State of the Lower Chippewa River Basin*.
- Big Swamp Wildlife Area* - WDNR. Retrieved January 13, 2011, from Wisconsin DNR: http://dnr.wi.gov/org/land/wildlife/wildlife_areas/bigswamp.htm
- Tiffany Wildlife Area* - WDNR. Retrieved January 13, 2011, from Wisconsin DNR: http://dnr.wi.gov/org/land/wildlife/wildlife_areas/tiffany.htm
- Whitman Dam Wildlife Area* – WDNR. Retrieved January 13, 2011, from Wisconsin DNR: http://dnr.wi.gov/org/land/wildlife/wildlife_areas/tiffany.htm
- Merrick State Park* – WDNR. Retrieved January 13, 2011, from Wisconsin DNR: <http://dnr.wi.gov/org/land/parks/specific/merrick>
- Forest Planning for Wisconsin's Future – Buffalo*. Retrieved January 13, 2011 from University of Wisconsin: <http://www.uwsp.edu/cnr/landcenter/forestplanning/CountyPages/buffalo.htm>
- Impaired Waters Program*. Retrieved October 6, 2010, from Wisconsin DNR: <http://www.dnr.state.wi.us/org/water/wm/wqs/303d/index.htm>
- Runoff Management – Notice of Discharge (NOD) Project Grants ...* - WDNR. Retrieved February 11, 2011, from Wisconsin DNR: <http://dnr.wi.gov/runoff/grants/applications/NOD.htm>
- State of Wisconsin Blue Book – 2005-2006.
- State of Wisconsin Blue Book – 2009/2010.